

521
H
30
963
N/C

ed by
Limited
gland

Aquatic Biology Abstracts

ject Index to Volume 2, 1970

U. of ILL. LIBRARY

JAN 7 1974

CHICAGO CIRCLE



Information Retrieval publication

Copies of abstracted material

Due to copyright restrictions the publishers cannot supply copies of material from which the abstracts are prepared. However, provided the necessary copyright declarations are made, copies will normally be obtainable from your local library or, in case of difficulty, from the National Reference Library of Science and Invention (Holborn Division), 25 Southampton Buildings, Chancery Lane, London WC2, England. The publishers will be pleased to give any assistance they can.

Titles published by IRL :

Aquatic Biology Abstracts

Calcified Tissue Abstracts

Entomology Abstracts

Genetics Abstracts

Microbiology Abstracts

section A :

Industrial microbiology

section B :

General microbiology and bacteriology

Nucleic Acids Abstracts

Virology Abstracts

Compiled and published by
Information Retrieval Limited
11 Falconberg Court
London W1V 5FG England

Editor in chief
E.S. Krudy
Editor
Carolyn Roberts
Compiled by
P.R. Auber

Aquatic Biology Abstracts

Subject Index to Volume 2 1970

Aquatic Biology Abstracts was published from January 1969 to June 1971. In July 1971 it was amalgamated with Current Bibliography for Aquatic Sciences and Fisheries produced by FAO to become Aquatic Sciences and Fisheries Abstracts (ASFA).

© 1973 Information Retrieval Ltd
1 Falconberg Court London W1V 5FG England

All rights reserved by the publisher.
No part of this book may be reproduced or
transmitted in any form by any means,
electronic or mechanical, including photo-
copying, recording or any information
storage and retrieval system, without
permission in writing from the publisher.

A

- Abnormalities**, Gymnura, Gulf of Kutch. 4297
- Abra alba**, 551
- Abramis**, 4855
taxonomy, 8128
- Abramis blicca**, 2 mouth openings. 5314
- Abramis brama**, 7299, 7333
host to Diplozoon paradoxum. 2589
olfactory organ. 811
peculiarities of linear growth, Kakhovka reservoir. 8937
viability of embryos. 8969
- Absorption spectra**, Physalia physalis. 3329
- Abu Dhabi**, Foraminifera. 3884
- Abundance**, prawns, Godavari estuary. 4070
- Abyssal community composition**, Lake Baikal. 9074
- Abyssal zone**,
Bacteria. 5771
biochemistry of zooplankton. 5513
Calanoida. 8544
Caridea, Indian Ocean. 8560
collection of Nectothuria translucida gen. et sp.n. (Holothuria), Kurilo-Kamchatka. 7115
meiobenthos, Pacific Ocean. 6630
Peloscolex spp.n. Atlantic. 3349
Prosobranchia, Asia. 7035
- Acanthacartia deshaiyai**, Vellar Estuary, India. 5954
- Acanthamoeba castellanii**, photoinhibition of growth. 7629
- Acanthaster planci**,
ecology, Indo-Pacific. 7914
population control, Indo-Pacific. 6167
- Acanthemblemaria rivasi sp.n.** western Atlantic. 7355
- Acanthephyra**, 8560
- Acanthobothrium**, taxonomy, hosts, biology. 2586
- Acanthobothrium**. 8483
- Acanthobothrium spp.n.** Virginia. 5883
- Acanthobothrium americanum sp.n.** Virginia. 5883
- Acanthobothrium lineatum sp.n.** Virginia. 5883
- Acanthocephala**. 8117, 8179, 8488
Chad. 7692
Raorhynchus terebra. 3954
- Acanthocephalus falcatus**, in Euproctus montanus. 764
- Acanthochiton**. 6162
- Acanthochiton armatus**. 7105
- Acanthochiton communis**, distribution, Mediterranean. 3493
- Acanthocidaris**, Hatakeziama Island. 4177
- Acanthoclada gen.n.** (Porifera), New Zealand. 4824
- Acanthocottus bubalis**. 8515
- Acanthocotyle elegans**, ultrastructure and function of adult epidermis. 8501
- Acanthocyclops americanus**, ecology, River Moskva. 6941
- Acanthocyclops fontinalis sp.n.** underground waters, Bulgaria. 1215
- Acanthocyclops viridis**, growth in relation to type of prey. 3354
- Acanthoecopsis sp.** 5853
- Acanthohaustorius millsi**, ecology and life-cycle. 187
- Acantholiparis caecus sp.n.** description and distribution. 430
- Acanthomysis sculpta**, behaviour and larval development. 5989
- Acanthopagurus dubius gen. et sp.n.** 4036
- Acanthoparyphium spinulosum**, viability of metacercaria in oyster. 248
- Acanthopeltis japonica**, morphology, development and genetics. 1075
- Acanthophthalmus semicinctus**, shoulder girdle. 862
- Acanthopleura spinosa**. 7105
- Acanthopleuroceras binotatus**, designation of type species. 7095
- Acanthopsis**, integument and cutaneous sense-organs. 5315
- Acanthopterygii**, melanism. 6486
- Acanthosentis tilapiae**. 7692
- Acanthosphex leuynnis**, distribution, Porto Novo, South India. 4396
- Acanthosquilla derijardi sp.n.** Madagascar. 7746
- Acanthurus glaucopareius**. 4524
- Acanthurus triostegus sandvicensis**, habitat selection. 3022
- Acanthurus zanthopterus**. 4524
- Acari**. 7834
- Acartia bilobata sp.n.** India. 3355
- Acartia clausi**. 3720, 7473
Black Sea. 3989
ecology. 2357
reproduction, development, Black Sea. 1883
- Acartia latisetosa**, Lake Quarum. 4519
- Acartia plumosa**, seasonal distribution, west coast of India. 5955
- Acartia tonsa**. 3720, 5961
- Acclimation**,
Amphibia, Australia. 8733
Carassius auratus. 5325
Umbra limi. 7298
- Acclimation, oxygen**, consumption and temperature, Littorina, Mytilus. 7867
- Acclimation, respiration**, in Culex pipiens. 4102
- Acclimation, temperature**. 8077
effect on fatty acid composition, Carassius auratus. 6444
effect on lipid composition of gill mitochondria, Carassius auratus. 7301
Thamnophis, Natrux. 8813
- Acclimatization**,
Amoeba proteus, dehydrogenase. 5830
Jasus lalandei off the French Atlantic coast. 693
morphological changes, Acipenser nudiventris, Aral Sea and Lake Balkhash. 9022
significance of enzymes. 5309
- Accumulation of ions**,
Ambystoma. 7148
calcium, Algae. 8283
calcium, strontium. 7599
Chara corallina. 4644
Cyclotella nana. 5671
effect of propionate and other organic ions on sodium transport across toad bladder. 5082
effect of salt depletion on hydromineral balance, larvae, Ambystoma gracile. 5071, 5072
¹³¹I, biota of Fern Lake, Washington. 4571
iron, freshwater plants. 7594
liver and kidney, Raja clavata. 5215
mercury, Chaetoceros. 3214
phosphorus, Ankistrodesmus. 3226
plutonium, polonium, isotopes, Ascophyllum nodosum. 8372
radionuclides, Lampsilis radiata. 5019

Accumulation of ions, *contd.*

- radio-phosphorus, *Mytilus edulis*. 8681
- ruthenium red, fish extraocular muscles. 3703
- scavenging, *Mya*, *Mercenaria*. 6144
- shells, Pteropoda. 6109
- strontium, caesium, Balaenoptera, *Pagophilus*. 6302
- yttrium, *Porphyra*. 5750
- zinc, *Chlorella*. 8344
- zinc, *Cyprinus*. 6455

Accumulation of nutrients, nitrate, *Lemma minor* in dark. 8425

Acentrogobius aestuarius, distribution, Laccadives. 4303

Acentropus niveus, respiratory apparatus, Poland. 4981

Acerina. 4855

Acerina cernua. 7364

Aceroides latipes latipes. 7745

Acestrorhynchini, taxonomy. 5316

Acestrorhynchus, osteology. 5335

Acetabularia. 3828, 8326

Andhra Pradesh, India. 546

chloroplasts, polysaccharides. 4640

enzyme activity. 3819

genetics. 7504

modification of whorl morphology. 3223

multiplication of chloroplasts, enucleated cell fragments. 5689

nucleus-dependent lactic dehydrogenase. 7502

oscillation of regulatory processes, enzymes. 7505

photosynthesis, influence of red and blue light. 3224

Acetabularia mediterranea,

abnormal morphogenesis. 28

cap formation. 3819

chlorophyll content of cells. 1770

community, north Adriatic. 4637

method to obtain high frequency, stalk division. 4641

morphology of cap rays and cysts. 4639

photosynthesis, photorespiration and respiration of chloroplast. 547

photosynthetic intermediates. 4638

protein synthesis in cells and isolated chloroplasts. 7503

variation in quantity of DNA in plastids. 5690

Acetobacter xylinum, crystallite size. 2504

Acetylcholine, *Hirudo medicinalis*. 3958

N-*Acetylhistidine*, metabolism, goldfish. 3005

ACHase,

ciguatoxin effect in vivo. 930

electric organ, *Electrophorus electricus*. 8140

from carp brain. 406

giant axon, squid. 7902

inhibitors. 4180

temperature effects, *Carassius* and *Fundulus*. 3006

Achlya. 6516, 7584

growth on amino acids. 5805

parasite of *Perca*, *Salmo*, Lake Windermere. 6516

Achlya ambisexualis,

cellulase induction and wall extension. 1123

growth. 6819

Achlya flagellata, infecting *Palaemonetes*. 195

Achnanthes. 5651, 6742

Achnanthes minutissima. 3792, 6742

Achradina pulchra. 3885

Mediterranean Sea. 580

Achrochaetium godwardense sp.n. India. 7536

Achromobacter. 3462, 3769, 3857, 3858, 5772, 6689

Achtheres, revision of genus *Salmincola*. 4010

Acid hydrolase, activity, pars intermedia, *Xenopus*

laevis. 6276

Acid phosphatase,

excretion, *Mytilus edulis*. 3482

prolactin cell, *Poecilia latipinna*. 2327

tail, *Xenopus laevis*. 6282

urodele eyes. 2851, 2852

Acids,

chromatography, fin whale. 6316

Voronezh River. 6619

Acinetidae. 3901

Acinetobacter. 6689

Acipenser,

anaesthetic, M.S. 222-Sandoz. 2309

antigenic peculiarities of serum proteins. 8191

aquaculture, Volgograd power station. 9019

distribution of larvae, California. 7385

hatchery reproduction, Caspian Sea. 9020

hybrids, Danube. 5429

Acipenser medirostris. 7385

Acipenser nudiventris, changes in morphology, Aral Sea and Lake Balkhash. 9022

Acipenser ruthenus, biochemistry and physiology. 2308

Acipenser sturio. 5163, 8860

Acipenser transmontanus. 7385

chorioidal tapetum lucidum. 4440

Acmaea digitalis,

growth influences. 4999

maintenance of shell pattern. 7028

Acompscephalum tortum gen. et sp.n. (Cestoda),

from *Synodus intermedius*, Bermuda. 8484

Acontiphorus antennatus, taxonomy. 4894

Acontiphorus armatus, variability. 4894

Acorus, productivity and root/shoot ratios. 4775

Acoustic system, *Stenella caeruleoalba*. 2912

Acrania, Solomon Islands. 283

Acris, geographical variation of blood and liver proteins. 6204

Acris crepitans, diurnal rhythm, heat resistance. 3502

Acritarcha, from a boring, Ypres. 8391

Acrochaetium, parasites, ecology. 3263

Acrochaetium pectinatum, morphology and reproduction cultures. 1791

Acrocirridae fam.n. (Polychaeta), taxonomy. 2602

Acroloxus, distribution, Lake Baikal. 7030

Acroneuria californica, size relationships with prey. 706

Acropora. 3933

Acrosiphonia, life-history, Iceland. 3227

Acrothoracica, biology. 4016

Acrylic acid, in Chlorophyceae. 5688

Ateocina. 7440

ACTH, in pituitary of migratory *Oncorhynchus*. 839

Actinia equina,

carotenoids. 3914

carotinoid composition, North Sea and Adriatic. 6890

reproduction. 2579

Actinioerythrin, carotenoids of *Actinia equina* red variant. 3914

Actinocleidus bennetti. 8480

Actinocleidus georgiensis. 8480

Actinocyclus. 5651

Actinogonium. 5662

Actinomycetes,

allochthonous leaf components. 3301

British Isles, Lake District. 2552

cave flora, British Isles. 6800

humic and fulvic acids as growth and sporulation media. 3859

North Sea and Atlantic sediments. 77

- Actinomycetes, contd.**
sediments, glacial lakes. 8417
- Actinopyga lecanora.** 5966
- Actinopyga mauritiana.** 5966
- Actinopyga miliaris.** 5966
- Actinosphaerium eichorni.** 7626
- Activity patterns,** larvae of *Protonemura meyeri* and *Chaoborus punctipennis.* 2726
- Activity,** phosphorylase, *Anodonta cygnea.* 7068
- Activity-physical,** daily rhythms, *Bufo viridis.* 8753
- Actographs.** 6268
- Actomyosin ATPase,** activation by lecithin, Pisces. 8851
- Actumnus similis sp.n.** West Pacific. 8562
- Acuminodeutopus.** 4533
- Adagnesia bifida.** 7138
- Adansonian classification,** of *Chlorella* strains by computer. 2506
- Adaptation,**
behaviour of intertidal molluscs. 2010
jaws, *Pleuronectiformes.* 1630
swamp worm *Alma emini* to low oxygen. 7702
- Adenine nucleotides,** degradation in muscles of crab and king-crab during storage and cooking. 680
- Adenophorea.** 7690
- Adeorbis subcarinatus.** 4540
- Adineta oculata.** 4864
- Adinia xenica.** 4477, 6544
- Adsorption,** yttrium, sea water. 6643
- Adults,**
Bonnemaisonia hamifera, gametophyte developments. 4708
Clupea harengus, Norwegian fishing industry. 5238
median eye, Crustacea, South Africa. 7751
Rana catesbeiana, haemoglobin. 6261
sporophyte, *Nemalion multifidum.* 8385
- Aechmophorus occidentalis.** 7460
- Aedes aegypti.** 6075
- Aedes atropalpus,** maintenance of laboratory populations. 6068
- Aedes (Mucidus) spp.** Africa. 8616
- Aedes polynesiensis,** parasitism by *Coelomomyces macleayae*, Fiji. 5802, 6069
- Aega tenuipes,** French Guiana. 4043
- Aegiceras.** 7596
- Aeginopsis.** 4832
- Aeolidiidae,** Tanzania. 1985
- Aeolis camtchatica,** taxonomy. 7037
- Aequipecten irradians,**
effect of light on growth rate. 742
reproductive physiology. 8672
- Aequorea.** 4833
- Aequorea aequorea,** structural element equivalent to contractile ring in cortical cytoplasmic filaments of cleaving eggs. 5859
- Aeration,** in sewage and sludge treatment. 1707, 3759, 5574, 6660-6663, 6669, 6670, 9062, 9123
- Aerobacter.** 3826
- Aerobacter aerogenes.** 7007
- Aerocystis,** of carp. 868, 869
- Aeromonas.** 5772
- Aeromonas liquefaciens,** necrotic factor for eel. 1096
- Aeromonas salmonicida,** disease in *Oncorhynchus.* 4325, 7279
- Aeshna.** 3420
- Aeshna cyanea,** anal pyramid. 2708
- Aeshna grandis,** new to Romania. 711
- Aeshna mixta,** effect of temperature on larval instars. 8617
- Aeshnidae.** 3729
- Aestivation,**
Biomphalaria glabrata, genetics. 3438
Bulinus nasutus. 8652
spontaneous electrical and acetylcholinesterase activity during, *Pila globosa.* 235
- Aetea.** 8724
- Aetideopsis retusa.** 8544
- Aetiology,** of aerocystis in carp. 868
- Afghanistan,** taxonomy and distribution of Amphibia and Reptilia. 5067
- Africa,**
aquaculture development. 3557, 3567
Architectonicidae from west coast. 228
Central, limitations of algae growth. 1015
Central West, Tardigrada. 2734
diseases in parasites of fish in warm-water ponds. 3571
distribution of Coleoptera. 2711
East, Clupeiformes of coastal waters. 360
lakes, *Lates niloticus.* 2280
lakes, speciation, fish. 3024
lakes, vertical mixing in consequences. 3730
North-West, Sparidea. 447
Penaes duorarum. 3372
potamolepid sponges. 3323
review of Zygnemaceae. 53
South West, *Caligus mortis* sp.n. 3357
South West, *Cancerilla tubulata* parasitic in *Amphipholis squamata.* 3358
West, *Pinnotheres leleouffi* and *Pasiphaea ecarina* spp.n. 2661
- Africophilus congener.** 8619
- Africophilus differens.** 8619
- Africophilus jansei.** 8619
- Africophilus josi.** 8619
- Africophilus nesiotes.** 8619
- Afrindella.** 5056
- Agar,**
extraction from *Gelidium amansii.* 6786
formation ability, *Gelidium amansii.* 6787
Gracilaria. 6788
- Agardiella tenera,** dessert gel compositions using extracts. 5741
- Agarella gracilis.** 5842
- Age,**
Coregonus nasus in Mackenzie and Coppermine rivers. 830
determination of, in salmon by examination of fin rays. 373
influence of, on uptake of glycine- C^{14} in *Neanthes.* 654
Salmo gairdneri, British Columbia. 2984
- Aggregata eberthi,** ultrastructure. 4803
- Aggregations,**
Cololabis saira. 2317
Perca fluviatilis and *Notropis hudsonius.* 417
Protozoa, Potomac River. 2564
Opiothrix fragilis. 2828
- Aging,**
Anguilla rostrata, New Jersey. 7386
Chionoecetes opilio, Japan Sea. 6967
Cynolebias bellottii. 456
dragonflies, using parasitic mites. 2729
Gadus morhua, Gulf of Maine. 6484
growth patterns, *Chione stutchburyi.* 7875
inhibition of, in *Campanularia hydroid.* 632
Limanda Herzensteini, Japan. 7399
Limanda yokohamae. 463

Aging, contd.

- Mallotus villosus*, Newfoundland, 8096
Merluccius capensis, 3650
Merluccius, Southeast Atlantic, 8978
Morone chrysops, Mississippi River, 8995
Octopus vulgaris, 7903
Oncorhynchus masou, Japan Sea, 7281
otoliths, *Merluccius bilinearis*, Gulf of Maine, 6485
otoliths, *Oncorhynchus nerka*, 6416
otoliths, *Pollachius virens*, 5381
otolith punch, 3624
Parophrys vetulus, California, 6578
Pollachius virens, North Sea, 5383
Prionotus evolans, Chesapeake Bay, 6514
radiocarbon dating of lake deposits from Western Victoria, Australia, 1759
Rana temporaria, 7182
Salvelinus fontinalis, Maine, 7296
scales, *Morone americanus*, 5401
Sebastes, Newfoundland, 6522
Spirodela oligorrhiza, 3872
tagged *Mirounga augustirostris*, Oregon, 7220
tumour relationship, Protozoa, Coelenterata, Pisces, 4570
- Aglaantha**, 4832
Aglaothamnion cordatum, 8278
Aglaurides fulgida, 3967
Agmenellum quadruplicatum,
characteristics of mutants, 6735
growth characteristics of mutants, 5631
Agnesia glaciata, taxonomy, 4199
Agnesiidae, review, 4199
Agonidae, standardization of plate terminology, 464
Agonus cataphractus, growth, relation with sexual cycle and thyroid activity cycle, 4397, 7347
Agriculture, use of dihalo-sulphones as pesticides, 4763
Agrobacterium,
ecology, Baltic, 4755
taxonomy, 590
Ahnfeltia plicata, 5626
Allophryne ruthveni, Surinam, 2048
Aiptasia, 3874
Aiptasia pallida, effects of calcium on undischarged nematocyst, 8466
Akkesiphycus lubricum, Shiretoko Peninsula, Hokkaido, 2532
Alaria marciae, 5908
Alaria marginata, development of gametophytes in saline pond water, 1784
- Alaska**,
Amchitka Is., new range for *Sebastes rubrivinctus*, 909
Chrysophyceae, 2497
Katalla, non-marine molluscs, 2766
pollack fishery, influence of freezing rate on the quality of fish, 4393
Port Moller Bay, Mollusca, 2739
water pollution, 2412
Albatross, ecology, Campbell Island, 8020
Albinism,
inheritance, *Oryzias latipes*, 3696
Penaeus aztecus, 8596
Albula vulpes,
host to *Spinitectus beaveri* sp.n., 5935
leptocephali from Angolan waters, 820
Albulidae, 7663
Alburnus alburnus, 7364
fecundity, British Isles, 4381
- Alcaligenes**, 6689
Alcicornis carangis, anatomy of attachment organ, Bermuda, 8488
Alcippe nassarioides, see *Trypetesa nassarioides*.
Alcohol dehydrogenase, *Astasia longa*, 8393
Alcohols,
bile alcohols, 4367
unsaturated, in wax esters of roe, *Trichogaster*, Mugil, 7375
Alcyonae, 3326
Alcyonium, 6631
ecology, Scilly Isles, 4835
Alcyonium pacificum, distribution, Akkeshi, 6891
Alcyonium pusillum, 3913
Aldabra Atoll,
ecology, 8243
schooling behaviour of *Lutianus monostigmata*, 7366
Aldolase,
isozymes, *Seriola*, *Microstoma*, *Spheroides*, *Sebastes*, 4575
pike muscle, 392
Rana pipiens, 5111
Trematomus borchgrevinki, 5421
Aldrichetta forsteri, parasitism by *Prototransverso-*
trema steri gen. et sp.n. Australia, 8511
Alepisaurus, 5221
Alepisaurus ferrox, 5430
feeding behaviour, Japan, 9023
feeding behaviour, Pacific, 5430
Alepocephaloidea, morphology and systematics, 5230
Alepocephalus bairdii, 5164
Alepocephalus rostratus, 5164
Alestes baremoze,
feeding habits, 5317
nutrition, 8127
relative growth, Lake Chad, 4358
Alestes dageti, feeding behaviour, 7334
Alestes macrophthalmus, reproduction and ecology, 863
Algae, 5959, 8267
Akhult Mire, Sweden, 7485
algal products, carrageenan, 3196
algalidal compositions containing 2-thiazolethiol, 1050
algicides, 6733
aminosulphonic acids, 3189
antibacterial components in, 519
Argyll, Scotland, 8279
artificial, 4594
artificial seaweed, 3788
as solution to world hunger, 38
bibliography of French papers, 1963-66, 5
benthic marine, calorific values, 1014
benthos, North Carolina, 3792
benthos, Washington, 6728, 8282
bioassays for nitrogen and phosphates, 1033
biosynthesis of hybrid proteins, 4597
biosynthesis of phytoquinones, homogentisic acid, 5711
bloom, in Vietnam, 1746
boring, 2492
British Columbia, 6727
Bryozoa associations, California, 4192
calcareous, Brazilian coast, 2404
calcium uptake, 8283
carotenoid patterns, light-induced xanthophyll, 7488
cave flora, British Isles, 6800
checklists for Finland, 3789
chemical studies, strontium, 3833
chlorophyll content, cell division rate, 4489

Algae, contd.

- coefficient of expansion. 2
- colonization, New York. 8281
- competition within community. 4584, 8286
- composition of algalicides. 3785
- concentration of pesticides. 3130
- Crecy Lake. 4509
- culture. 1745, 5622, 8288
- culture apparatus. 3786
- culture in synthetic medium. 2483
- culture method. 3786
- culture of marine algae in laboratory. 6729
- cuticle. 2477
- Cyanophyceae, Argentina. 4604
- dark treatment at spore stage. 3190
- device for obtaining axenic cultures. 3285
- dispersal by Insecta. 4104
- distribution and biosynthesis of arachidonic acid. 518
- distribution, Akhult Mire, Sweden. 6724
- distribution along N. American Atlantic coast. 6
- distribution, Ardenne marsh. 3192
- distribution, Baltic Sea. 4584
- distribution, Bay of Fundy. 4580
- distribution, British Isles, bibliography. 4578
- distribution, Canary Islands. 4585
- distribution, Caribbean Sea. 4581
- distribution, Ille-et-Vilaine. 4508
- distribution, Kinu-numa. 3195
- distribution, Lyngør, S. Norway. 61
- distribution, Meurthe River. 5566
- distribution, Mochimune, Suruga Bay, Japan. 1740
- distribution, Moosi River, India. 516
- distribution, Okinawa. 3194
- distribution, Panama Canal and tributaries. 41
- distribution, Peru. 3
- distribution, Solomon islands. 8280
- distribution, Somerset. 3191
- distribution, South India. 22
- distribution, Visakhapatnam, India. 4579
- distribution, Vulcan Island. 4582
- distribution, Washington. 6728
- distribution, Washington, British Columbia. 6725
- dried, lubricous, preparing specimens of. 3485
- ecology. 5620
- ecology, Florida. 5617
- ecology, freshwater environment. 5523
- ecology, Mlungusi Dam. 4587
- ecology, Solomon islands. 8280
- effect of gibberellins on growth. 3188
- effect of grazing by Strongylocentrotus. 2033
- effect of Peridinium toxins. 4744
- effect of vitamin concentration. 1764
- endoparasites. 93
- English and Japanese common names. 4
- epipelic, effect of physical and chemical conditions on. 474
- eutrophication, Oslofjord. 6673
- evolution of sulphur compounds. 4727
- fatty acids in lotic periphyton. 1739
- fixation, by OsO_4 in CCl_4 . 565
- fixation of nitrogen. 8296
- flocculation. 2500
- fossils, new species. 3804
- fossils, Pennsylvanian type n. USA. 5629
- freshwater algae. 3789, 3792
- freshwater algae from Minnesota. 3802
- fruiting behaviour, India. 8278
- genetic control of radio-resistance. 5716
- hormonal relationships in pure culture. 13
- hydrocarbon distribution. 2548
- hydrostatic pressure effects on photosynthesis. 4588
- inhibition of nitrite assimilation by phosphorylation uncouplers. 5693
- limitations of growth in Central African waters. 1015
- littoral algae of Curacao, Netherlands Antilles. 3790, 3791
- littoral bloom, Lake Constance. 4586
- littoral Cyanophyceae around Marseilles. 3793
- lyophilization. 8261
- marine, biochemistry. 1741
- marine, carbohydrates. 1736
- marine, ionic relations. 1737
- marine, Pusan, Korea. 1743
- marine species of Algeria. 59
- measurement of primary production. 8287
- method for controlling growth using methylene bithiocyanate or monohalomethyl thiocyanate. 1016
- methods for determining, primary productivity. 5518
- methods for increasing digestibility. 48
- method for isolation. 1017
- microalgae influence on structure and strength of ice. 3803
- microalgae, technical production. 2478
- nutrient media. 4593
- nutritional value to *Lepomis macrochirus*. 4414
- of 2 ponds, valley of the Dyle, Belgium. 971
- of small temporary ponds. 1744
- optimum use, radiant energy. 4595
- parasitism by Chytridiomycetes. 5800
- patented formula for algicide. 1018
- photosynthesis. 5621
- photosynthetic pigments. 4589
- phycocoloids production, Rhodophyceae. 4598
- physiological aspects of vertical zonation. 1092
- physiology. 8293
- phytosociological investigations. 3790, 3791
- pigment analysis by chromatography. 6730
- planktonic, Newfoundland. 6599
- planktonic, of a polluted pond. 980
- polar ecology. 7487
- polarographic determination of halogens. 5623
- pollution control. 3783
- pollution, radioactive, North Adriatic. 4551
- pollution tolerance. 3129
- population dynamics. 8285
- population studies, Algeria and Kabylie. 1
- postglacial lakes, UK. 5627
- preparation of cell division promoting materials from fresh water species. 14
- production of algin. 4599
- production of amino acids. 5626
- production of sodium alginate from *Phyophyceae*. 5625
- primary production. 7486
- Pyramydomonadaceae, China. 8365
- removal in unit processes. 7
- reversible denaturation of C-phycocyanin. 8306
- seaweed harvesting. 8276
- soil from herbarium of the Missouri Botanical Gardens. 1021
- spiruline, in food composition. 521
- structure of algalicides. 3787
- structure of eyespots. 517
- studies on periodicity of growth and reproduction. 3834
- succession, sewage. 3143
- sulphite reductase activity. 4596

Algae, contd.

- supply of carbon dioxide to culture. 4592
- survival under adverse conditions. 7487
- swamp, Ardenne. 7484
- taxonomy 1925-1957. 2474
- taxonomy 1959-1961. 2475, 2476
- taxonomy 1967. 6723
- techniques of preparation, permanent slides. 4603
- technological problems of culture. 6731
- temperature tolerance, Pacific coast. 5619
- thermal, effect of light intensity on photosynthesis. 1738
- uptake of ^{131}I . 26
- use in fertilizer. 4601
- vertical distribution, Lago do Castanho. 5527
- vitamin contents, Baltic Sea. 8277
- Algal extracts**, preparation. 10
- Algal harvesting**, hooks and grapnels for kelp. 2535
- Algal mats**, community succession. 3104
- Algal products**, gelatinizing substances, Gracilaria. 3271
- Algansea monticola**. 6320
- Algeria**, marine algae. 59
- Algicidal properties**,
 - of *Cytophaga* N-5. 594
 - of patented compound. 520
- Algicides**, (see also weed control). 6732, 9138
 - composition. 3785
 - diamines. 2484
 - patent. 1120
 - patented compositions containing 2-thiazoethiol. 1050
 - patented formula. 1018
 - structure. 3787
- Algin**, process and production. 4599
- Alginic acid**, content of *Sargassum*. 8378
- Algites enteromorphoides** sp.n. Missouri. 5691
- Alima**. 4904
 - keys. 7746
- Alima hyalina**. 7746
- Alimentary organs**,
 - amino-acid transport, *Haemulon*. 3658
 - anatomy, *Asplanchna sieboldi*. 5923
 - anatomy, *Bufo marinus*. 7956
 - anatomy, Cetacea. 3550
 - anatomy, *Dorosoma* spp. 3606
 - anatomy, *Ophicephalus marulius*. 7408
 - anatomy, *Pontonema vulgaris*. 6914
 - anatomy, *Portunus sanguinolentus*. 6987
 - anatomy, *Rhynchobdella aculeata*. 6585
 - anatomy, histology and histochemistry, *Peltodoris*. 4129
 - bucco-pharyngeal cavity, morphological variations, Gobiidae. 8991
 - cilia in cloaca and hind gut, *Xenopus laevis*. 8004
 - feeding behaviour, *Octopus vulgaris*. 5038
 - gastric mucosa sodium transport, hypoxia, *Rana temporaria*. 7993
 - gastric shield ultrastructure, *Lasaea rubra*. 7885
 - glucuronidase, *Rana*, *Bufo*. 5123
 - hepatopancreas collagenase, *Uca pugnator*. 4973
 - histochemistry of polysaccharides, *Pimelodus maculatus*. 8965
 - intestinal convulsion, Pomacentridae. 6494
 - intestinal parasites, *Pollachius* spp. 5382
 - intestine, *Carassius auratus*. 5320
 - intestine, reaction to environmental stress, *Cyprinus carpio*. 6461
 - intestine, salt and water absorption, *Anguilla* *anguilla*. 6545
 - intestine, secretory cells, *Diplodiscus subclavatus*. 5896
 - intestine, spontaneous activity, *Procambarus*. 4081
 - midgut diverticulum, *Calanus helgolandicus*. 5964
 - morphology, physiology, *Mugil corsula*. 7405
 - mouth size, larvae, Pisces. 7264
 - osmosis, frog. 7961
 - peritoneum, mitosis, *Molge vulgaris*. 8754
 - peritrophic membrane, *Neoamphitrite figulus*. 8531
 - pharyngeal bulb musculature, *Perinereis cultrifera*. 4880
 - pharynx regeneration, *Planaria*. 4852
 - proboscis musculature, *Perinereis cultrifera*. 4879
 - protein histochemistry, *Pimelodus maculatus*. 8966
 - pyloric caeca proteolytic enzymes, *Oncorhynchus keta*. 8914
 - radula, *Busycon canaliculatum*. 5003
 - radulae, cowries. 7022
 - situs correlations, *Triturus alpestris*. 5124
 - stomach, *Opisthobranchiata*. 7021
 - storage and synthesis, glycogen, *Strongylocentrotus purpuratus*. 7925
 - taste buds in oesophagus of freshwater fish. 342
- Alisma**. 8137
- Alkaline phosphatase**,
 - Anguilla japonica*. 9026
 - epididymis of *Hirudinaria granulosa*. 141
 - hepatopancreas, *Astacus leptodactylus*. 7757
 - Rana esculenta*. 7168
- Alkaloids**,
 - from marine algae. 1082
 - hordenine from *Phyllophora nervosa*. 1082
- Alkanes**, biosynthesis in *Nostoc muscorum*. 527
- Allergens**, of fish. 346
- Alligator mississippiensis**. 7174
 - redistribution of cardiac output when diving. 777
- Allocentrotus fragilis**, air bladder of *Nereocystis leutkeana*. 3495
- Allocyttus**. 8039
- Allogalatheia** gen.n. Japan. 8557
- Alloglossidium hirudicola**, (Trematoda), parasite of *Haemopsis*. 5884
- Allogromia**. 7626
- Allogromia laticollaris**, food uptake and digestion. 88
- Allomyces**,
 - fertilization-induced chemotaxis of zygote. 1124
 - dl-sirenin from, total synthesis. 597, 598, 599
 - structure of sirenin. 76
- Allopora californica**, carotenoids. 7666
- Alluroididae**. 4512
- Alma emini**, adaptation to low oxygen levels. 7702
- Alona bicolor**, biology, taxonomy, male, described. 2623
- Alonella**. 6937
- Alons**. 6938
- Alosa**. 7720
- Alosa alosa**. 5163, 8860
- Alosa fallax**. 5164
 - larva. 819
- Alosa finta**. 5163
- Alosa sapidissima**. 5402
 - inflammatory lesions, California. 4313
 - temperature effects on behaviour. 6381
- Alphanomyces**. 7584
- Alphestes multiguttatus**. 8041
- Alpheus**. 5549
- Alpheus malabaricus**, abnormal forms, Godavari estuary. 4027

- Alps**, *Krenopsectra fallax* gen. et sp.n. (Chironomidae). 1958
- Alternanthera philoxeroides**, production and biochemistry. 2361
- Altitude**, effect on aquatic plants. 2561
- Alutera scripta**. 4524
- toxin, *Palythoa tuberculosa*. 3684
- Aluterus**. 5222
- Alytes obstetricans**. 7152
- bio-acoustics. 6205
- degenerative phenomena, intestinal epithelium. 3528
- histogenetic phenomena, intestinal epithelium. 3529
- Amalophora macilenta**. 6940
- Amalophora rotunda**. 6940
- Amantadine hydrochloride**, effect on sea urchin ova. 2832
- Amaroucium yamazii**, asexual reproduction. 5063
- Amateur improvement**, guiding of organisms, fish screen, *Oncorhynchus*, *Salmo*, Oregon. 8870
- Ambassis gymnocephalus**, feeding of mullet eggs. 4398
- Ambassis lala**, electron microscopy. 3680
- Ambloplites**. 8158
- Ambloplites rupestris**. 5223
- parasitism by *Lyrodiscus minimus*, Illinois. 5879
- Amblyrhynchus cristatus**, cutaneous vascular changes during heating and cooling. 325
- Ambystoma**. 8732
- effects of salt depletion on larval hydromineral balance. 5071, 5072
- larvae, regeneration in denervated limbs. 6207
- Ambystoma dumerili**, reproduction, Mexico. 8744
- Ambystoma gracile**, Marion Lake, B.C. 3523
- Ambystoma jeffersonianum**, spermatophore production. 762
- Ambystoma macrodactylum**, parasitism by *Gyrodactylus ambystomae* sp.n. California. 5903
- Ambystoma maculatum**, mutant, Florida. 7948
- parasites. 291
- Ambystoma mexicanum**. 5615, 7150, 8738, 8768
- differentiation of tail somite region of neural plate. 763
- effects of UV-irradiation altering situs of viscera at gastrula and neurula stages. 5075
- embryology. 8738
- first cleavage of egg. 7949
- formation of mesoderm. 7149
- gas transport of blood of gill- and lungbreathing forms. 292
- nomenclature. 290
- nucleolar organizers, ribosomal gene content. 6221
- pituitary xenografts on *Notophthalmus viridescens*. 2049
- role of urinary bladder in water balance. 5074
- transplantation immunity. 6206
- Ambystoma opacum**, larvae, effect of lunar eclipse. 4215
- parasites. 291
- Ambystoma tigrinum**, effects of fatty acids, from metabolism. 3503
- Ameiurus**, chemoreception in lateral-line systems. 812
- Ameiurus nebulosus**, carbon dioxide diffusing capacity. 5318
- America**,
- Crocodylus* osmoregulation. 3533
- North, *Diaptomus*. 3998
- Amia calva**, visual cells. 4474
- Amino acids**,
- acid-soluble nucleotides, a mantle of *Haliotis discus*, chromatography. 6139
- aminosulphonic acid, *Grateloupia livida*. 5745
- Anguilla japonica*. 5434
- around histidine centre, chymotrypsin, *Chelydra serpentina*. 8807
- artificial feeding. 4334
- autoradiography, *Echinaster echinophorus*. 8716
- byssus, *Bivalvia*. 7061
- characterization of operculum proteins, *Buccinum undatum*. 7850
- Chlorella*. 3298
- collagen, *Penaeus setiferus*. 8597
- 3,4-dihydroxyproline, amino acid in diatom cell walls. 21
- distribution, Black Sea. 5559
- effect of salinity on, *Sesarma plicatum*. 211
- embryogenesis, amphibia. 4241
- estuarine environment. 5816
- free in nervous tissue, *Bufo regularis*. 7155
- glycine, uptake by animals, role of epiflora. 3350
- growth, *Ictalurus punctatus*. 7331
- growth, *Oomycetes*. 8418
- growth, *Saprolegnia*, *Achlya*, *Leptolegnia* and *Dictyuchus*. 5805
- haemolymph-free, *Crassostrea virginica*. 7882
- intestinal transport, *Haemulon plumieri*. 3658
- L- and D-, metabolism in *Chlorella* and *Ankistrodesmus*. 2502
- Littorina* and *Microphallus*. 1987
- metabolism, brain, *Octopus*. 7098
- metabolism, nervous system, Invertebrata. 7097
- Mya arenaria*, temperature effects. 4155
- Mysis relicta*. 1920
- Myxine glutinosa*. 5200
- Nostoc*, *Scytonema*, *Fischerella*. 3202
- osmoregulation in *Miamiensis avidus*. 1835
- Phaeodactylum tricornutum*, effect of salinity. 1767
- Phaeophyta*, Chile. 3259
- poly-U stimulation of single ribosomes, sea urchin. 6165
- production from Algae. 5626
- proline, vesicles, *Valonia*. 3248
- pyrimidine clusters in DNA. 8086
- reabsorption in antennal gland of *Carcinus*. 682
- relation to growth, *Laminaria*. 3258
- requirements for growth, *Catenaria anguillulae*. 3862
- requirements, *Pleuronectes*, *Solea*. 3043
- salmon calcitonin. 368
- Spirodela oligorrhiza*. 3311
- stimulating DNA replication. 4467
- stimulating DNA replication in poeciliid melanomas. 469
- stimulation of tumours, *Poeciliidae*. 3050
- Xiphophorus* x *Platypocilus*. 3051
- Amino acid composition**,
- Cestoda*. 3339
- Chrysaora quinquecirrha* nematocysts. 5866
- collagen, *Penaeus setiferus*. 8597
- dolphin myoglobin. 6313
- Falkenbergia*, Mediterranean. 3269
- Mya arenaria*. 4154
- Parapenaeus* flesh. 4066
- Penaeidae*. 6983
- Amino acid incorporation**,
- into sea urchin eggs. 7124, 7910
- Rana catesbeiana* muscles. 2058
- regenerating optic neurons, *Carassius auratus*. 8940
- Scenedesmus*. 6772

- Amino acid pool**,
blood, *Friocheir sinensis*, 8578
cestodes of elasmobranch, Massachusetts, 8483
- Amino acid sequences**,
cytochrome c, *Cyprinus carpio*, 5334
trypsinogen, dogfish, 7260
- Amino acid substitutions**, evolution, 4357
- Aminoacyl tRNA synthetase**, *Paracentrotus lividus*, 7121
- γ -Aminobutyric acid**, 8566
uptake in crustacean nerve-muscle preparations, 1926
- 2-Aminoethylphosphonic acid**, detection in phospholipids of *Cyclograpsus punctatus*, 8576
- Amino oxidases**, *Eledone cirrhosa*, 2024
- Aminosulphonic acid**, in algae, 3189
- Aminotransferase**, fish eggs and sperm, 2989
- Amiurus nebulosus***, 5342
pollution, caesium, 4544
- Ammonia**, 3883
blood, excretion in *Xenopus laevis*, 2068
ion currents in squid giant axon, 2028
sulphate, used to crystallize ferritin from Corbicula coelomic fluid, 732
toxicity to Diatomaceae, 9087
- Ammonoidea**,
extinction, 7094
Jurassic, Antarctica, 6155
Lake Como, 5015
Permian, Canada, 6154
- Ammonotheidae**, Ross Sea, 1965
- Amnicola**, 7019
- Amoeba**, 7620
inheritance of resistance to thymus histones, 7630
mitotic apparatus, 4804
movement, 7626
relative role of nucleus and cytoplasm, 7630
transmission of cytoplasmic determinants by microinjection of RNA-containing fractions, 1140
- Amoeba dubia***, induction of phagocytic reactions, 89
- Amoeba heterokaryons***,
character changes induced by heterologous nuclei, 1153
lethal effect of heterologous nuclei, 91
- Amoeba proteus***,
contraction of isolated contractile vacuoles, 7631
cytochemistry of dehydrogenase, 5830
estimation of thresholds of electrotactic responses, 7632
induction of phagocytic reactions, 89
pinocytosis and locomotion, 90
ribosome origins, 1839
role of nucleus and cytoplasm in division delay, killing and photoreactivation, 1152
timing of DNA synthesis, 92
- Amoeba terricola***, *Tulasnella zooecia*, parasite, 4772
- Amoebophilidium***, sensitivity of *Scenedesmus* to, 47
- Amoebophilidium* spp.n.**, parasitic in protozoococcus algae, 93
- Amoebocytes**, ingestion of thoroplast, *Pinctada radiata*, 2023
- AMP**,
and glycogenolysis in frog gastric mucosa, 312
and phosphorylase, activity in frog stomachs, 311
- 3'-5' AMP**, mediator of MSII and norepinephrine in the frog, 2090
- Ampelisca compressa***, 4533
- Ampelisca excavata***, taxonomy, 7754
- Ampelisca scabripes***, Gulf of Mannar and Palk Bay, 4028
- Amphiactis***, 5041
- Amphiascopsis***, 7089
- Amphibia***, 5531
batrachofauna of Patagonia, 4244
bibliography, southeast Asia, 7943
brain stem afferents from spinal cord, 7174
check list, Pinnacles National Monument and Bear Valley, San Benito and Monterey Counties, Calif., 286
concentrations of water, sodium, potassium in nucleus and cytoplasm, 8736
Cuba, 7147
DNA distribution, oocyte nucleoli, 5129
ecology, Marion Lake, B.C., 3523
ecology, Venezuela, 5065
ecology, Venice Lagoon, 4213
ecology, Zululand, 6203
erythrocyte haemoglobin, 8783
extrachromosomal nucleolar genes in oocytes, 289
follicular atresia of ovary, 2070
genetic basis for determination of sex, 8426
glutamate dehydrogenase biosynthesis in liver, 4242
interspecific variability of DNA, 3520
ion-exchange investigation, free amino acids, embryogenesis, 4241
leucocytes, 7319
lymphomyeloid organ histology, 7946
muscle regeneration, 8731
nerve and limb regeneration, 8739
neurohypophysial function, 2071
Niokolo-Koba National Park, Sénégal, 2047
osmic staining of photoreceptors, 4248
osmoregulation, 8734
parasitized by *Megalodiscus microphagus*, 2590
patterns and metamorphic changes of serum proteins, 6202
pineal organ endocrinology, 8741
population studies in a pond, 2046
protein, mesoderm-inductive, 3531
protein synthesis inhibitors, eggs, 8737
regeneration, 6272
reproductive ecology, Transvaal highveld, 287
resemblance of telecephalon with that of *Crossopterygii*, 5068
role of glandular activity in electrical response of skin, 5136
role of glandular activity in electrical response of skin to noradrenalin, 319
sedimentation behaviour, haemoglobins, 8768
specializations of Neotropical forms, 5069
tadpole growth prolactin effects, 5140
taxonomy and distribution, Afghanistan, 5067
thermal acclimation, Australia, 8733
Trinidad, 7146
type specimens, Macleay Museum, Sydney, 4212
ultrastructural cytochemistry, protein emission, auxocyte nuclei, 5096
ultrastructure, melanophores, hormones, 4247
ultrastructure of nuclear envelopes of oocytes, 4214
- Amphicyclus thomsoni***, Stewart Island, 4527
- Amphidinium carteri***-50, 9088
- Amphidinium klebsii***, carotenoid interconversion in culture, 4731
- Amphimixis***, 8486
- Amphipsopsis***, Mozambique Channel, 4530
- Amphioxus***, see *Branchiostoma*
- Amphipholis squamata***, 3358
- Amphiplaga***, 5205
- Amphipleura rutilans***, microscopy, 1760

- amphipnious**, 7422
amphipnious cuchia, ovular atresia, 1639
amphipoda, 5550, 6605, 7440, 8439
 caves, Istria, 4910
 distribution, 4072
 distribution, Gulf of Mannar and Palk Bay, 4028
 ecology, Greenland, 7745
 fresh water, Yugoslavia, 1900
 North Africa, 4908
 proposed suppression of 2 genera and 4 spp names, 194
 shallow-water sand community, Irish Sea, 676
 surf plankton, 2641
 well water, 675
amphiprion, uptake of protective substances, from anemone, 7348
amphiprion xanthurus, protection from sea anemones, 5387
amphiroa, genicular development, 2536
amphistichus argenteus, 5389
 osmoregulation, 5388
amphiuma, 8732
amphiuma means, 6223
amphiuma tridactylum, 8783
amphiura chiajei, life history, 8703
amphiuridae, taxonomy, 5041
amphocleithrum paraguayensis gen. et sp.n. (Nematoda), Paraguay, 4853
amphora francescae sp.n., 5656
amylase,
 and phosphorylase, culture, *Chlorella*, 7515
 polymorphism, *Asellus aquaticus*, 5991
amabaena, 3574, 4509, 6612
amabaena ambigua, wall development and tetrazolium chloride reduction, heterocysts, 8297
amabaena cylindrica, 8295
 composition of cellular envelopes, 6736
 nitrogenase from vegetative cells, 3794
 photostimulation of nitrogen fixation, 8298
amabaena variabilis, 8300
 cell dimensions and taxonomy, 11
 cells in diphenylamine, 4607
 cyanophage attack, 1817
 effect of inhibitors on bacterial cell wall synthesis, 8299
 light-dependent oxygen system, 4606
 photosynthetic reaction centres, 4683
 polarity of proton translocation, 591
amobia, 3428
amphithobadidae, 8069
amphis transilirata, *Anachis avara*, larvae, New England, 4114
amphisaesha, 7014
amcystis, 5711
amcystis nidulans,
 absorption spectra, chlorophyll a, 8302
 antibodies, 6737
 biochemical studies during synchronous growth, 1024
 chromatic changes in mutants, 3210
 DNA purification, 6738
 effect of maleic hydrazide on growth and mutation, 3795
 ferredoxin as cofactor in photophosphorylation, 5632
 genetic transformation, 8301
 identification of lipopolysaccharide in cell walls, 3796
 light-induced EPR signal, 5633
 mutagenesis, 2490
 mutagens, diethyl sulphate, 4609
 mutations affecting mitosis, 4610
 nitrogen chlorosis, 1749
 rapidly labelled polyphosphates and metaphosphates, 1025
 relation between pigment composition and CO₂ exchange, 1023
 synchronous cell divisions, 525
 ultrastructure during synchronous growth, 1750
 variability of morphology, 3200
Anadyomene saldantia sp.n. from Brazil, 548
Anaerobic metabolism, during development in *Artemia*, 662
Anaerobiosis,
 in *Cyclops varicans*, 1225
 role in the ecology and evolution of higher plants, 610
Anaesthetics, 6714
Amphibia, 6266
 cellular potentials, during anaesthesia, isolated spinal cord, frog, 7189
 effect on isolated spinal cord, frog, 7188
 effect on muscarinic sites of isolated frog ventricle, 2086
 frog, 7975, 7976
 invertebrate, 5822
 MS 222, 2309
 MS 222, *Negaprion brevirostris*, 3599
 MS 222, nitrogen excretion, *Lepomis macrochirus*, 4413
 MS 222, *Salmo gairdneri*, 7285
 Pisces, 6323
Anafilaroides, parasites, *Biomphalaria glabrata*, 5002
Anafilaroides rostratus, parasitism of *Biomphalaria glabrata*, 7695
Anal pyramid, *Aeschna* larvae, 2708
Anapagurus laevis, 5984
Anaperus biaculeatus sp.n., sublittoral, White Sea, 8489
Anaporrhuthum stunkardi sp.n. from *Scoliodon dumerilli* India, 1856
Anarchias grassi, distribution, Madeira, 9024
Anarrhichas orientalis, distribution, Japan, 6490
Anas, 6654, 8818
 diving reflex, behaviour relationship, 4224
 nesting and production, California, 8817
Anas platyrhynchos, response patterns to cutaneous mechanoreception, 7210
Anatidae, oil pollution treatment, 8816
Anatomy,
 adaptations to biotype, Testacea, 8443
 adrenal glands, *Stannius corpuscles*, *Clarias lazera*, 8135
Africophilus spp Malawi, Nigeria, 8619
 alimentary organs, *Deltaphyllum rhabdoides*, 5837
 alimentary organs, *Hemioniscus balani*, 3398
 alimentary organs, *Mugil corsula*, 7405
 alimentary organs, *Ophicephalus marulius*, 7408
Alloglossidium hirudicola sp.n., 5884
Ampelisca excavata, 7754
 anomaly P, *Rana esculenta*, 7167
 antennae, cerci, *Perla marginata*, 7015
 arterial system, *Biomphalaria glabrata*, 3439
 attachment organ, *Alcicornis carangis*, Bermuda, 8488
Balantidium elongatum, 4806
 basal bodies or oral apparatus, *Tetrahymena pyriformis*, 8455
 bill, *Haematopus ostralegus*, 8822
Bithynia caeruleans, Lake Balkhash, 7032
 body size, *Tilapia nilotica*, 7373
Calanus, Sea of Japan, 6944

Anatomy, contd.

- Callianassidae, Japan. 4916
- cap rays, cysts, *Acetabularia mediterranea*. 4639
- cardiac ganglion, *Limulus polyphemus*. 6093
- Cecina manhurica*. 1979
- cephalothorax, Tanais. 4972
- Cetitrema foliiformis* gen. et sp.n. 5887
- chorda intestinalis, *Nematoplane nigrocapitula*. 5907
- Chrysophyceae. 6740
- circulatory system, *Clarias batrachus*. 7309
- circumesophageal nerve, Decapoda. 4911
- Cladangia exusta* from the Indian Ocean. 3920
- compensation sac, Bryozoa. 7931
- Corvospongilla*, Cameroon. 4828
- Crucibranchia macrochira*. 7858
- Cryptomonas* spp. 4732
- Cupelopagis vorax*. 6917
- Cymatium*, Bursa. 1983
- deformities, chelae, *Palaemon adspersus*. 3416
- deutocerebral organ, *Macrura*, *Anomura*. 7749
- developmental stages, *Rana tigrina*. 6264
- digestive organs, *Opisthobranchia*. 7021
- digestive organs, *Rhynchobdella aculeata*. 6585
- digestive system, *Dorosoma* spp. 3606
- digestive system, *Portunus sanguinolentus*. 6987
- digestive tract epithelium, *Phoronis vancoverensis*. 6196
- digital anomalies, *Rana temporaria*. 7181
- epiphysis cerebri, *Leptonichotes weddelli*. 6308
- epiphytes distribution, stipe, *Nereocystis luetkeana*. 6784
- Fulalia viridis*, *Glycera convoluta* prepharyngeal masses. 6922
- Eunapius*, Cameroon. 4828
- eyes, *Ocypodidae*. 6958
- false annulus formation in scales, *Lepomis macrochirus*. 6501
- Foraminifera. 8447
- forebrain, *Ascapus truei*. 7950
- frontal wall, *Watersipora arcuata*. 7934
- gas bladders of fish. 3602
- gills deformity, *Etheostoma olmstedi*. 7356
- habenula, teleosts. 7342
- Halalaimus*. 7697
- Halocynthia aurantium*. 8728
- Heteropneustes fossilis*. 6465
- hypobranchial apparatus, *Engraulidae*, *Chirocentridae*. 6395
- hypothalamus, *Harpagifer bispinnis*. 4419
- hypothalamus, *Notothenia synobranchia*. 4419
- Indostomus paradoxus*. 6563
- infraciliature, *Chilodonella cucullulus*. 5833, 5834
- integument, *Thyone briareus*. 7926
- interphalangeal region, *Rana pipiens*. 6259
- intestinal convolution, *Pomacentridae*. 6494
- intramolluscan stages of *Dasymetra conferta*. 5894
- iridescent bodies, *Chondria*. 3268
- Joyeuxiella guilhoni*. 7682
- Kirchneriellusaccus lunatus* gen. et sp.n. 7519
- Kupffer's vesicle, *Pleuronectes*, *Gadus*. 7413
- lantern support structures, *Clypeasteroidea*. 6175
- larvae, *Oceanobdella blennii*. 4877
- leaves, *Nymphaceae*. 4780
- liver, *Ambystoma tigrinum*. 5076
- Lymnaea catascopium*, Michigan. 7043
- lymphomyeloid organs, *Amphibia*. 7946
- mesenchymatous cells, intramesoglean nerves, *Verticillium cynomorium*. 7679
- microtubuli, *Mougeotia*. 7520
- mitosis, *Closterium littorale*. 8353
- mouthparts, *Simuliidae*. 8630
- musculature, frog. 8793
- musculature, pharyngeal bulb, *Perinereis cultrifera*. 4880
- nephridia, *Phoronidea*. 4196
- nephridium, *Hirudo medicinalis*. 4874
- nervous system, *Ligia oceanica*. 4941
- neurohypophysis, *Salvelinus fontinalis*, tetrapods. 6437
- Nitzschia alba*, leucoplast. 8318
- normal pore system, *Ostracoda*. 6998
- Nucinella serrei*, Carolina. 3471
- oesophagus, *Teleostei*, India. 7343
- Oncomelania minima*. 1993
- paleae, *Pectinaria koreni*. 8536
- palp, *Physa acuta*. 5010
- papilloma-like growth, siphon, *Tresus nuttalli*. 6153
- Pelagohydra mirabilis*. 8473
- pharyngeal region, *Cephalochordata*, Madras. 4204
- Philine exigua* sp.n. *Melanesia*. 4130
- Philinoglossa marcusii*, British Solomon Islands. 4131
- phyllosomes larvae, *Panulirus*. 4956
- Pisces, Afghanistan. 8861
- Planodasy marginalis* gen. et sp.n. 6913
- postpharyngeal regions, *Cephalochordates*, Madras. 4203
- proprioceptors, Decapoda. 4915
- Prosimulium* larvae. 6088
- Protopterus* spp. 6584
- Pseudopleuronectes americanus*. 945
- radula, *Conidae*, America. 6107
- radula, cowries. 7022
- Raeta plicatella*. 264
- reproductive organs, *Octopus dofleini martini*, North Pacific. 6158
- reproductive organs, *Sardinella longiceps*. 8115
- retina, *Pagophilus groenlandicus*. 6309
- retina, *Sternoptyx diaphana*. 8929
- Saipanetta tumida*. 7816
- scales, *Cyprinus carpio*. 6460
- scute formation, *Gasterosteus aculeatus* marine form. 7396
- scute variation, *Gasterosteus aculeatus*, *Nasu*. 7397
- secondary sexual characteristics, *Hemicentrotus pulcherrimus*. 6178
- shell aberrations, *Ceratites*. 5032
- shell, *Olivancillaria urceus*. 8662
- shell pattern, *Acmaea digitalis*. 7028
- silverline system, reactions to damage, *Ciliata*. 6832
- sinistral flounders, Japan. 7412
- skull and swimbladder connections, *Megalopidae*. 5272
- skull measurements, *Castor fiber*. 7214
- skull, *Ompok bimaculatus*. 6474
- spermatozoa, *Octopus dofleini martini*, North Pacific. 6159
- spine formation, *Scenedesmus*. 3243
- spiral growth, *Ciliata*. 7628
- sporophyte, *Nemalion multifidum*. 8385
- Squamariaceae*, Japan. 3284
- Stenella ephrosyne*, Mediterranean. 8031
- systematic, *Rhodopeltis*. 3282
- Taenioma*, Venezuela. 6794
- telencephalon, *Chrysemys picta belli*. 8014
- temporal variation, *Brachionus calyciflorus*. 5926
- terrestrial adaptations, *Mniurpes macrocephalus*.

Anatomy, contd.

- 6505
- testes cord, Triturus pyrrhogaster. 8785
- Thalassia testudinum flower. 84
- ultrastructure, Ambassis lala. 3680
- Uruguaya repens. 8464
- Volvox carteri. 6779
- zoospore vesicle, Bulbochaete hiloensis. 6753
- Anax**, taxonomy, larvae. 7828
- Anax imperator**. 3420
- Anchialina madagascariensis sp.n.** 7755
- Anchialina typica**. 6963
- Anchicodium**. 5629
- Anchisquilla sp.n.** Gulf of Tonkin. 3382
- Anchoa hepsetus**. 6389
- Anchoa lamprotaenia**. 6389
- Anchoa mitchilli**. 6389
- Anchoa nasuta**. 6389
- Anchoa walkeri sp.n.** Pacific. 3604
- Anchoviella perfasciata**. 6389
- Ancistrocomidae**, ultrastructure of cortical regions. 3887
- Ancistrostylis groenlandica**. 3959
- Ancistrumina nucellae sp.n.** ecology. 4805
- Ancrocephalus parvus**. 5881
- Ancylidae**,
 - distribution. 8647
 - ecology, Madagascar. 3435
- Ancylus fluviatilis**. 5524
- Ancyrocephalus**, taxonomy. 8490
- Andaman Islands**,
 - Dendrophyllia minuscula. 3936
 - Limnoria andamanensis sp.n. 1257
- Andaman Sea**, new sp of Calanopia. 152
- Androgenesis**, induced by radiation in fish. 815
- Anemone** fish, sting protection. 3034
- Anemonia sulcata**,
 - nutritional relationship with its dinoflagellate symbiont. 3915
 - nutritional relationship with zooxanthellae. 631
- Angling**, survey, California. 3581
- Angola**,
 - coast, Penaeidae. 2662
 - elopoid leptocephali. 820
- Anguilla**,
 - anaphylatoxin-forming system in plasma. 8194
 - chromatographic analysis, haemoglobin. 8198
 - diseases. 5432
 - histology structure, interrenal and water and electrolyte metabolism. 8195
 - osmoregulation, protein synthesis. 3685
 - potassium inactivation and impedance changes during spike electrogenesis, electroplaques. 6462
- Anguilla anguilla**. 7346, 8860
 - bone, hypercalcaemia. 5435
 - calcium loss. 3686
 - circular dichroic studies, antibodies. 8197
 - effect of actinomycin D on ATPase activity. 8196
 - effect of tetrapropylenebenzenesulphonate. 5579
 - feeding in ponds. 2311
 - lunar activity. 2310
 - olfactory organ. 811
 - osmoregulation. 2339, 7387
 - pre-optic nucleus and hypothalamic tracts. 453
 - regulation of calcium and inorganic phosphate. 2340
 - renal function. 2341, 2342
 - root-shift in haemoglobin. 9025
 - salt and water absorption, intestine. 6545
 - sodium space. 2312
 - spine curvature. 3039
- Anguilla australis**, growth. 2314
- Anguilla dieffenbachii**, growth. 2314
- Anguilla japonica**. 8081, 8082
 - adaptation to seawater. 3038
 - alkaline phosphatase from intestinal mucosa. 9026
 - chloride cells. 4442
 - essential amino acids. 5434
 - hepatectomy. 2313
 - histochemistry of epidermis mucus. 5431
 - immunology to Vibrio anguillarum. 2315
 - leucocyte numbers. 818
- Anguilla marmorata**, ecology, Yaku Island. 6546
- Anguilla rostrata**,
 - gastric intrinsic factor. 1640
 - pituitary-adrenocortical feedback mechanism. 6547
 - population estimates, New Jersey. 7386
- Anguilla vulgaris**. 4798
 - papillomas. 4441
 - rate of 'Root shift' in red cells and haemoglobin solution. 6548
- Anilocra physodes**, cuticle. 4060
- Animals in captivity**, Eudypula minor novae-hollandiae. 8821
- Anisakis nematodes**. 4430
- Anisogammarus tiuschovi**. 6625
- Anisops**, Australia. 214
- Ankistrodesmaceae**, taxonomy. 8325
- Ankistrodesmus**,
 - effect of light on nitrate and nitrite assimilation. 1046
 - metabolism of L- and D-amino acids. 2502
 - nitrate-reductase activity. 3225
- Ankistrodesmus braunii**,
 - decrease in sensitivity to X-radiation. 5692
 - detoxication of simazin. 3827
- Annelida**. 3736, 5609, 8241
- Annual rhythms**, reproduction, Orconectes pellucidus. 4952
- Annual variations**,
 - growth rate, Calliarthron, California. 3266
 - seals. 3546
 - swarming of Platynereis, Arcachon Bay. 7709
 - urine production, Procambarus clarkii. 3379
- Annuli**, jaw-tagged Salmo. 858
- Anodonta**, make-and-break responses, nerves. 7064
- Anodonta anatina**, chromosomes. 243
- Anodonta cygnea**,
 - adductor muscle and nervous element, larva. 7070
 - cytosomal lipids in neurons. 7069
 - direct neuronal pathways. 744
 - diurnal rhythm of activity. 7067
 - electrical activity of nerves. 4139, 7072
 - frequency-dependence of action potential on non-myelinated nerve. 7065
 - 5HTP-DOPA decarboxylase, nervous system. 7063
 - increase of serotonin in the adductors. 4141
 - inhibition of phosphorylase activity. 7068
 - morphogenesis of cytosomes. 4140
 - morphogenesis of cytosomes in neurones. 7073
 - rhythmical behaviour. 7071
 - role of transmitters and regulation of catch muscles. 7066
 - ultrastructure localization, succinic dehydrogenase activity, nervous system. 7074
- Anolis carolinensis**. 8773
- Anomalocardia**. 7877
- Anomatus fraseri**. 7693

- Anomia ephippium**. 7089
hyssus amino acids, 7061
- Anomia facunosa**. 7129
- Anomia hysterita**. 7129
- Anomia retusa**, taxonomy. 7135
- Anomia striatula**. 7129
- Anopheles albimanus**. 6075
- Anopheles quadrimaculatus**, parasitism by *Coelomomyces punctatus*, Carolina. 6073
- Anopheles stephensi**, maintenance of laboratory populations. 6068
- Anoplocapros lenticularis**, parasitism of intestine by *Paradiscogaster manteri* sp.n. 5897
- Anoplopoma fimbria**. 8044
distribution, Sea of Okhotsk. 7349
fishing industry, California. 8044
muscle protein polymorphism, Pacific. 3654
tagging experiments, California. 6491
- Anoplosolenia**. 3812
- Anoptichthys jordani**, thyrotropin secreting basophils. 3701
- Anostraca**, spoor. 7717
- Anseropoda lobiancoi**, taxonomy. 2823
- Antarctica**,
Echinoidea. 2825
lakes, photosynthesis. 3100
Ross Island, Cyanophyta. 3801
structure and strength of ice. 3803
yeasts, taxonomy. 3860
- Antennablennius bifilum**. 8163
- Antennal gland**, physiology, *Carcinus maenus*. 682, 683
- Antennule**, cypris larva of *Balanus balanoides*. 170
- Anthocidaris**. 7124
- Anthocidaris crassispina**,
enzyme release following fertilization. 5042
spermatozoa fractionation. 5049
- Anthopleura nigrescens**, escape response to *Hervilla*. 245
- Antialgal agents**, patent for mono- diesters of 13 β -alkyl-17 α -alkymylgon-4-ene-3 β , 17 β -diols. 1776
- Antibacterial substance**, produced by *Corynebacterium kusaya*. 1811
- Antibiotics**. 5192, 6716, 7508, 7509, 7279
aabomycin A, production, isolation. 3303
acrylic acid, Chlorophyta. 5688
actinomycin D, effects on ATPase activity, *Anguilla anguilla*. 8196
actinomycin D, effects on cell division and chloroplast development in *Euglena*. 1090
action in cultures of marine algae with bacteria associated. 1094
action of streptomycins on chloroplast. 3845
antibacterials produced by bacteria. 5788
antimicrobial agents, marine environment. 5781
antimycin A. 5228
antimycin, effect in oligotrophic lake. 5308
beauvericin, structure. 1208
Benadryl, *Ipomoea pes-caprae*. 3324
changes of plastid system with, *Euglena gracilis*. 8395
chloramphenicol, effect on growth and physiology, *Polytomella caeca*. 5725
control of *Salmonellae*. 6340
control of *Saprolegnia*, *Salmo salar*. 7291
dermadin. 1745
Dysidea herbacea. 5781
effect, genetic transformation, *Anacystis nidulans*. 8301
effect of chloramphenicol on *Euglena gracilis*. 3848
effect of, on heart of *Paratelphusa masoniana*. 198
effect of streptomycin on dividing *Euglena*. 5758
effect on chloroplast and mitochondrial development in *Euglena*. 1076
effect on growth of *Chaetoceros*. 3806
effect on growth of *Monochrysis lutheri*. 3809
Garcinia morella. 4761
in fish feeds. 2919
induction of valvae formation, *Cyclotella cryptica*. 5667
inhibition, metabolism, *Anguilla*. 3685
inhibition of nitrite assimilation, Chlorophyta. 5693
molluscicides. 4127
neguvon. 3641
Phakellia flabellata. 5781
Phormidium mucicola, sensitivity and resistance. 5639
population control. 4600
principles of *Garcinia morella*. 107
produce axenic multicellular algae, brackish environment. 4602
sewage treatment. 3772
Spheroides maculatus toxins. 5477
suppression of extranuclear streptomycin dependence, *Chlamydomonas reinhardtii*. 8335
- Antibodies**,
Anacystis nidulans. 6737
anti-hapten, lower vertebrates. 1738
of *Chlamydia*, in Antarctic penguins and seals. 786
shark, purification and binding. 2942
- Antifouling paint**. 2469
- Antigens**,
Chlorophyceae. 4635
detection of in predators of triclads. 1178
histoincompatibility. 6718
of fish. 346
soluble fish collagen. 7318
transplants between *Anura* and *Urodela*. 7145
- Antimitotic agents**, see **Inhibitors**.
- Antimora rostrata**, parasitism by *Choricotyle oregonensis*. 5888
- Antisera**, for detecting triclad antigens in predators. 1178
- Antithamnion**. 4705, 5737, 6784
- Antithamnionella**. 4705
- Antrocampus chappuisi**. 7725
- Antrocampus longifurcatus**. 7725
- Anura**,
extent to which mesonephros is influenced by primary ureter acting as inducing agent. 5080
germinal cells. 7144
mating call orientation. 2056
migration of cells, ureter. 3506
quantitative phyletics and evolution. 5070
specializations of Neotropical forms. 5069
taxonomy. 288
thiamine content of eyes. 7157
- Apeltes quadracus**, parasitism by *Gyrodactylus* spp. 6549
- Apertile**. 4851
- Aphanis dispar**, sodium, chloride and water balance.
- Aphanizomenon**, gas vacuoles. 3204
- Aphanizomenon flos-aquae**, culture requirement. 4611
- Aphanocladia**, Portugal. 7537
- Aphanodictyon**. 7584
- Aphanomyces**. 7584
- Aphanomyces astaci**,
adaptation as a parasite. 1125
physiology of zoospore production. 1126

- Aphanomyces astaci*, contd.
resistance by some crayfish. 1234
- Aphanomyces euteiches*, culture for obtaining mycelium-free oospores. 6817
- Aphanomyces laevis*. 8418
- Aphanopus carbo*. 5164
- Aphanotheca halophytica*. 7487
- Aphelasterias japonica*. 8431
- Aphelidium chlorococcarum*, mass culture. 5831
- Aphelocheirus*. 8607
- Apherusa*, West Coast of Istria. 4029
- Apholate*, effects on *Ictalurus haematology*. 411
- Aphrophyllum rugosa*, Lower Carboniferous, New South Wales. 1852
- Aphylla*. 7001
- Apical hairs*, initiation and suppression in *Fucus* embryos. 1073
- Apiosoma*, from freshwater fish. USSR. 94
- Apistogramma agassizi*, breeding. 3023
- Apistonema*,
life history, morphology of stages. 4620
pigments. 3805
- Apjohnia laetevirens*, cell wall constituents. 3820
- Aplochiton*, juvenile. 822
- Aplysia*,
bile pigment metabolism. 1978
central nervous control of gill movements. 1975
DNA and nuclear volume. 720
effect of temperature change on membrane potential and conductance, giant nerve. 8648
electrophysiology of eye. 2001
giant neurons. 1976
membrane potential produced by sodium pump. 8649
reproductive organs, structure and function. 3436
RNA in single neurons. 8651
stimulation and recording from single cells. 8650
synaptic influences on neurons. 5000
transmission by cholinergic neuron. 2782
- Aplysia brasiliiana*, DNA and nuclear volume. 718
- Aplysia dactylonema*, stretch receptors. 5001
- Aplysia juliana*, carbohydrases. 1977
- Aplysia punctata*, foot musculature. 227
- Aplysia vaccaria*, learned behaviour. 2002
- Aplysiidae*, sperm. 7842
- Aplysilla rosea*,
choanocytic origin of male germplasm. 5857
ultrastructure, spermatogenesis. 8461
- Aplysilla sulfurea*. 5781
- Aplysin*, isolation from *Laurencia okamurai*. 63
- Aplysinol*, isolation from *Laurencia okamurai*. 63
- Apodachlya brachynema*. 8418
- Apodachlya minima*. 8418
- Apogon*. 8985
- Apogon coccineus*, distribution, Laccadives. 4303
- Apogon nigrofasciatus*, distribution, Ryukyu Islands. 6488
- Apogon retrosella*. 8041
- Apogonidae*. 6488
bioluminescence, Philippines. 8985
- Aponogeton*, taxonomy, Australia. 4782
- Apophallus venustus*. 6518
- Aporomicrodus*. 4270
- Apparatus*, see *Methods*.
- Appendicularia*,
distribution, North Atlantic. 6201
Red Sea. 7937
seasonal variations, Madagascar. 5062
- Aprionodon*, distribution, Georgia. 4295
- Apseudes intermedius*, occurrence, Brazil. 5990
- Apus cancriformis*, pigments. 6935
- Aquaculture*. 6714
Acipenser, Caspian Sea. 9020
Acipenser, Volgograd power station. 9019
Africa. 3567
algae. 8283
application of primary productivity studies. 2374
artificially and naturally produced salmon fry. 843
automatic fish feeder. 7248
avoidance of chemical contamination. 6703
bacteria of bivalve algal foods. 2786
2-bar system for seining farm ponds. 8049
benthic marine algae. 5746
Calanus helgolandicus. 5962
caridean shrimps, abbreviated development. 2682
carp breeding, Tekanpur reservoir. 3003
Chlorophyta. 8328
Clarias spp Thailand. 3629
Columnaris disease. 5432
control, *Ichthyophthirius*. 3319
Copepoda. 5957, 5958
Copepoda for genetic evolutionary research. 5960
covers for fish ponds. 6348
Cyprinodon, use of Fintrol-5, for control. 6552
Cyprinus. 8119
Cyprinus carpio. 7320
Cyprinus carpio, peat-hags. 3568
Dead Sea. 3569
development, Caribbean Sea. 6040
development of resource, Europe and Africa. 3557
diseases of carp, Poland. 3640
dispersal of wild and hatchery-reared *Salmo*. 850
Esox lucius, South Dakota. 6396
Europe. 3566
feed experiments, Mugilidae. 6568
feeds for channel catfish. 875
fish diseases. 3571
fish diseases, Europe. 3570
fish health. 2938
fish larvae. 6334
fish parasites and diseases, North Africa. 3572
fish production, rural ponds, India. 2378
fish yield. 3734
fishery management techniques. 2922
Florida. 5178
food conversion, *Seriola*, *Chrysophrys*, *Pneumatophorus*. 6526
hatcheries, *Oncorhynchus tshawytscha*, Columbia River. 6425
Ictalurus punctatus. 6467
influence of food organisms on development, Copepoda. 5959
inorganic fertilizers. 2379, 3594
insect larvae. 4097
Institute of Marine Sciences, University of Miami. 1933
Iran. 3583
Laminaria hyperborea in dark. 5735
larvae, Cancer productus. 3385
Macrobrachium rosenbergii. 2650, 2651, 3406
marine algae. 6729
marine fish cultivation research in Japan. 6330
marine fish farming. 2920
marine invertebrates. 7474
Marisa cornuarietis. 5009
Meretrix lamarckii. 7886
mixed fish culture. 2932
Mizuhopecten, *Spisula*, Japan. 6142
Mollusca. 4997

Aquaculture, contd.

- Mugil cephalus, UAR. 3695
mussels. 8676
new systems, Far East. 3637
off-bottom oysters, N. America. 2789
Ostrea edulis. 6150
Ostrea edulis, Spain. 6149
oysters, association fauna, Ostend. 7089
oyster culture, Long Island Sound. 6136
oyster farming, Crassostrea, Japan. 6135
Palaemon serratus. 2691
parasites and diseases, Asia and Far East. 3573
parasite incidence, Rana catesbeiana. 5098
pearl ground, oceanography. 3472
Penaeus duorarum, Florida. 4960
Penaeus japonicus in Japan. 2676
Penaeus, Louisiana. 4961
Phycomycetes. 5806
phytophagous fish, Russia and Far East. 3632
planktonic copepods. 3720
Pomatoschistus minutus. 6513
ponds, increasing productivity. 2931, 2933
population dynamics of bacteria, USSR. 4282
possibility, Razelm-Sinoe. 4521
protection by air bubble barriers from oil pollution. 9097
raising "summerlings". 2934
rearing elvers in aquaria. 923
rectangular circulating rearing pond. 6333
role of soil in fish pond production. 2376
Salmo, Cyprinus. 3619
Salmo irideus, mass selection. 6431
Salmo, Scotland. 6435
salmon. 8892
Scenedesmus, Bulgaria. 4691
Scenedesmus, Chlorella. 4690
Scombridae. 8161
seaweed. 8276
sensory deprivation. 6382
shellfish, Scotland. 8554
spawning of eggs on artificial weeds, Sagami Reservoir. 7317
spiny lobster. 4934
Stichococcus, USSR. 4696
Stizostedion catostomus. 2923
stock production model. 2921
supply of carbon dioxide, algal culture. 4592
technological problems, algae. 6731
temperate fish, Central and South America. 2930
Tilapia, France. 3674
Tilapia hybrids, brackish water environment. 3673
Tilapia, Malacca. 3675
Tilapia nilotica, mono-sex. 2301
Tilapia, Uganda. 2292
U-tube water oxygenation. 3171
UK. 6691
United States. 3565, 3590
use of drugs to increase growth rate. 7249
use of Oregon moist pellet as feed, Micropterus salmoides. 6503
use of thermal waters, USSR. 3638
warm-water food fishes. 2929
- Aqualinderella fermentans** gen. et sp.n. (Phycomycetes). 4768
- Aquaria,**
fast-flow sealed disc filter system. 2444
in teaching ethology. 3028
source of Mycobacterium skin infection. 2550
- Aquariology,**
cover for fish ponds. 6348
design, Octopus bimaculatus, Homarus americanus. 6702
diseases, Mycobacterium marinum. 4759
feeding and respiration of corals. 5874
improvements in pumps. 6708
- Aquatic flora, (see also Weeds)**
role in transmission of bilharzia, Volta Lake, Ghana. 230
role of anaerobiosis in ecology and evolution. 610
- Arabella iricolor.** 8522
- Arabian Sea,**
Candacia samassae. 3994
primary production. 2383
- Arachidonic acid,**
distribution and biosynthesis in algae. 518
in Rana temporaria. 5117
- Arachnida aquatica,** occurrence of Suctorina. 6837
- Aratus pisoni,** agonistic behaviour, Goniopsis. 3383
- Arbacia.** 7117
- Arbacia lixula.** 6703
- Arbacia punctulata,**
effects of nicotine on fertilization. 8708
histones in early embryogenesis. 8706
microtubules and filaments in folopodia, secondary mesenchyme. 4178
nuclear activity during oogenesis. 2032
RNA synthesis in anucleate egg. 8707
mRNA, embryos. 8705
spermatogenesis. 4179
- Arca noae,** association with Crambe crambe, Mediterranean. 6886
- Archaeocyathi.** 7656
- Archaeogastropoda,**
Hardangerfjord. 7026
Lake Baikal. 7030
- Archaeogomphus.** 7001
- Archaeolithophyllum.** 5629
- Archaeology,** molluscs, California. 2740
- Archaeozoa.** 7656
- Archamia.** 8985
- Archangium violaceum,** cellulolytic activity. 600
- Archaphanostoma agile,** reproduction. 2594
- Archiannelida.** 5942, 8439
taxonomy. 4872
- Archidistoma productum,** English Channel. 6197
- Architectonicidae,** from west coast of Africa. 228
- Archosargus.** 7270
- Arctic,** reproductive cycle of Daphnia. 667
- Arctic conditions,** occurrence of Zostera marina. 1135
- Arcticidae,** used in place of Cyprinidae (Mollusca). 2788
- Arctides guineensis,** Phyllosoma larvae. 1230
- Arctocephalus,** distribution and identity, Australia. 3547
- Arctocoris carinata.** 7824
dispersal, Finland. 1947
- Arctomyalina vokesi** sp.n. (Pennsylvanian bivalve) Canada. 7075
- Arctonoe vittata,** possible 'defence' response. 135
- Arctoscopus japonicus,** population biology, Japan. 7350
- Ardeidae,** breeding ecology, Florida. 785
- Arenicola brasiliensis,** occurrence in Pakistan. 1191
- Arenicola grubbi,** feeding behaviour, Black Sea. 8525
- Arenicola marina,**
carbon dioxide fixation by blood. 3956
CO poisoning. 2621
digestive enzymes. 2603
functional and molecular properties of haemoglobins.

- Arenicola marina*, contd.
8526
oxygen fixation by blood. 3343
- Argasilus auritus*, distribution, Newfoundland. 4897
- Argentina**,
Gastrotheca christiana sp.n. 300
Middle Parana River Valley, limnology. 3733
new Cyanophyceae. 4604
rediscovery of *Pithecopus pailonius*. 303
Argentina spp, Peru. 8898
Arginase, liver, *Bufo bufo* larvae. 8748
Arginine,
biosynthesis, regulation of, in *Chlamydomonas*. 559
biosynthesis, specific regulatory mechanism in
Chlamydomonas. 560
Arginine kinase in cilia, *Tetrahymena pyriformis*. 6862
Argiodia nobilis. 5966
Argobuccinum argus, feeding and proboscis. 2743
Argonauta argo. 5222
Argulus sp.n. infection of *Lepisosteus platyrhincus*,
Everglades. 4461
Argyropelecus, distribution, Gulf of Mexico. 4314
Argyropelecus olfersi, eye muscles. 8899
Argyrosomus. 6489
Argyrosomus regium. 5164
Arhynchoatidae. 8069
Arlicidea suecica. 5544
Arriidae, Nigeria. 395
Arriomma bondi, Gulf of St. Lawrence. 3025
Artrion lusitanicus, Germany. 7029
Arriosoma balearicum. 9014
Arstichthys, aquaculture. 3632
Arstichthys nobilis. 3566, 5340, 6478
Arthus heudeloti, structure and ecology, Nigeria. 395
Armadillidae. 7741
Armandia brevis, periodicity of collagen in brain
sheath. 3957
Arnoglossus oxyrhynchus sp.n. 7412
Arrenurus agrionicolus, used for aging dragonfly hosts.
2729
Arrenurus spp.n. 6092
Arhopalites aggtelebensis buekkensis subsp.n.
Hungary. 2709
Arhopalites hungaricus intermedius subsp.n. Hungary.
2709
Arsonic, effect on absorption of phosphate, *Chlorella*.
4656
Aseno-organic compounds, water-soluble, in marine
fish. 814
Asemesia. 7768
Asemesia longinaris,
fishery biology. 176
growth, migration, ecology. 2642
Asemia, nutritional effects, different locations on
larval development of crabs. 5945
Asemia salina. 5946
action of radioactive pollution. 3982
chromosome number. 2624
conversion of β -carotene into canthaxanthin. 5948
cytochrome c in oocyte. 4883
effect of beauvericin. 1208
effect of freezing and thawing on ionic properties of
gills. 6936
effect of hydroxyurea on maturation divisions and
segmentation of eggs. 7716
Fertility. 5946
genetics of haemoglobins. 1876
growth and reproduction. 7714
Bil-thymidine incorporation in nauplius: DNA
synthesis. 2625
inhibitory active enzymes. 7713
intercoil connections of kidney. 148
ionic relations. 1206, 1207
lactate dehydrogenase activity and anaerobic
metabolism during development. 662
metabolism of carotenoids. 1877
microfibrils in endoplasmic reticulum. 7715
ontogeny and morphology. 3980
protein synthesis in embryos. 1213
ribosomes. 3981
role of ATPase in response to salinity changes. 2628
spirochete-like organism in tissues. 5947
spontaneous mutants. 147
tensid effect. 5579
uptake of glycine. 3350
- Arthrobacter**, colour problem in distribution systems.
3294
- Arthrocnemum**. 7596
- Arthrodira**, fossil dinichthyid, Devonian, Iowa. 6553
- Arthropoda**. 3875, 8241
compound eyes. 2704
relationship between genetic determination and sex
hormone control. 7712
- Arthrospira brevis**, proposed replacement by *A.*
neapolitana. 526
- Arthrospira neapolitana**, proposed to replace *A. brevis*.
526
- Articulata**, cleavage morphology, eggs. 7932
- Artificial feeds and feeding**,
carp, USSR. 3638
chelated minerals, *Salmo*. 2980
effect of anchovy on flavour of chickens. 8095
Esocidae, Pennsylvania. 4317
feeds for *Ictalurus punctatus*. 875
fish feeds, containing antibiotics. 2919
fish feeds containing growth-promoting additive. 347
fishmeals. 4272
growth, 0-group plaice, *Pleuronectes platessa*. 6582
methods for increasing digestibility of microalgae
used as food for livestock. 48
Mugil spp. 6568
nutritive value of *Chlamydomonas reinhardtii*. 8336
Oregon moist pellet, *Micropterus salmoides*. 6503
Piscis to chickens. 8085
pond carp. 8954
production by sewage treatment. 9109
replacement, brewers' yeast, trout feed. 4334
Salmo. 6426
veligers, *Nassarius*, *Crepidula*. 6119
vitamin B. 8042
- Artificial seaweed**, thermoplastic. 3788
- Artyechinostomum sufrartyfex**, in *Rana cyanophlyctis*.
313
- Arvicola terrestris**, ecology. 7212
- Asatasiaceae**, North East China, Brazil. 7546
- Ascapus truei**,
auditory receptors. 4216
forebrain. 7950
gene amplification in oocytes. 6208
Rhyacotriton olympicus, food similarities. 4217
- Ascaraphis morrhuae**. 8515
- Ascidia**,
distribution, Dakar. 4209
distribution, Gulf of Gascogne. 7938
hydraulics. 760
- Ascidia celtica** sp.n. British Isles. 7936
- Ascidia correi** sp.n. 7938

- Ascidia malaca*, 7141
 experimental gynogenesis, 7140
 metamorphosis in seawater lacking $\text{SO}_4^{=}$, 284
- Ascidacea**,
 bathyl, Atlantic, Pacific, 7138
 distribution, Baltic, 5060
 distribution, English Channel, 6197
 ecology, Dakar, 2843
 ecology, Greenland, 7939
- Ascidella aspersa*, 7141
- Asclepias incarnata*, parasitized by *Physoderma*, 2554
- Ascocotyle sexidigita* sp.n. California, life history, 8491
- Ascomycetes**,
 Japan, 4767
 New England, 8419
- Ascophyllum nodosum**, 3257
 accumulation of Plutonium and Polonium isotopes, 8372
 seasonal variations, Trondheimsfjord, 8371
 source of invertebrate distribution, 2527
 zonation, vesicle pressure and gas composition, 1067
- Ascorbic acid**, see **Vitamin C**.
- Asellidae**,
 ecology, Saône, 5992
 taxonomy, 8568
- Asellopsis intermedia*, growth reproduction, respiration, C utilization, 2629
- Asellus*, 5306, 6959, 8568
- Asellus aquaticus*,
 amylase polymorphism, 5991
 effect of temperature on life cycle and growth, 1232
 exopeptidase, 6971
 morphology of stomach, 177
 reproductive stasis, 4912
 spermatogenesis, 1901
- Asellus coxalis septentrionalis*, drift, 1231
- Asellus holsingeri*, 7742
- Asexual reproduction**, see **Reproduction**.
- Asia**,
 diseases of fish in warm-water ponds, 3573
 N.E., Flagellata, 2573
 weed control, 3560
- Asineops**, 5205
- Askenasyella randhawai* sp.n. Madras, 549
- Asparagopsis*, amino acid composition, Mediterranean, 3269
- Aspartase**, liver, Scyllium, 8072
- Aspartate aminotransferase**, activity in early Strongylocentrotus development, 757
- Asphyxia**, see **Suffocation**.
- Aspidisca psammobiotica*, 7627
- Aspidogaster conchicola*,
 distribution, Romania, 8492
 in molluscs, Columbia River, 2808
- Aspidogastrea*, 8488
- Aspius aspius*, host to *Thwaitia kotlani* sp.n. 5936
- Asplanchna**,
 genetics of polymorphism, 1869, 1870
 ultrastructure of protonephridia, 7696
- Asplanchna brightwelli*, 6654
- Asplanchna sieboldi*, physiology, digestive system, 5923
- Assimineia japonica septentrionalis*, 6625
- Associations**,
Calliactis parasitica, *Dardanus arrosor*, Europe, 5863
Calliactis polypus, *Dardanus gemmatus*, Hawaii, 5862
- Calliactis*, Puerto Rico, 4836
- Calliactis tricolor*, *Dardanus venosus*, 117
- Calliactis tricolor*, Paguridae, Calappidae, Majidae, Caribbean seas, 5863
- commensalism, *Scomberomorus*, *Caranx*, 5208
- Dasyatis americana*, *Caranx ruber*, 5210
- 'defence' response in *Arctonoe vittata*, commensal of *Diodora aspera*, 135
- Evechinus chloroticus*, *Dellichthys morelandii*, 4447
- Fungiacava eilatensis* gen. et sp.n. (*Bivalvia*) and *Fungia scutaria*, 253
- Gigantactis macronema* commensal with holothurians, 274
- Harrietella simulans* and *Limnoria tripunctata*, 1218
- Heteroptera in artificial aquatic biotopes, 967
- holdfast fauna, *Laminaria*, British Isles, 7532
- host specificity of *Jocaste japonica* and *J. lucina*, 1256
- insects associated with *Spongilla*, 703
- maltoase excretion by symbiotic algae of *Hydra viridis*, 637
- marine fungi, 4766
- phytoplankton in pools, 955
- Platylepas*, *Dermochelys coriacea*, Trinidad, 4252
- Pseudanthessius*, *Crinoidea*, Madagascar, 8549
- regulation and maintenance of algal numbers in zooxanthellae-coelenterate symbiosis, 631
- scleractinian, population dynamics, 4845
- Sunaristes* with hermit crabs, 164
- symbiosis between Pleistocene crabs and pelecypods, 201
- symbiosis, Metazoa, 7614
- Thraulodes speciosus* nymphs and chironomids, 218
- Astacus**, 7749
 degeneration of organs, 4030
 evolution, endopeptidases, 6961
 host-parasite relationship with *Aphanomyces astaci*, 4031
- Astacus astacus**,
 carotenoids in carapace, 677
 haemolymph coagulation, 4913
- Astacus fluviatilis**,
 immunology of trypsin and protease, 1233
 separation of carboxypeptidases from gastric juices by disc electrophoresis, 178
 ultrastructure, medio-intestinal gland, 7756
- Astacus leptodactylus**,
 effects of extirpation of sinus gland, 7757
 hermaphrodites, 4914
 immunology of trypsin and protease, 1233
 proprioceptors, 5993
 serine-containing centre of trypsin-like protease, 8569
 specificity of low mol wt protease, 179
- Astacus pallipes**, spontaneous activity in cardioaccelerator nerves, 6960
- Astasia**, 3847
- Astasia femica*, parasite of copepods, France, 6838
- Astasia longa*,
 alcohol dehydrogenase localization, 8393
 effect of growth rate on DNA content of cells, 1087
 isolation of phosphorylating mitochondria, 2543
 sulphate-controlled culture, 4642
- Asterias**, 7113
- Asterias amurensis*, 7108, 7618, 8856
 chromatophoric activity, radial nerve extracts, 5043
 effect of gonad extract on maturation of oocytes, 6171

- Asterias amurensis**, contd.
effect of hypercalcaemia on acrosomes. 7108
electrophoretic mobility. 5025
feeding on bivalves. 2824
mechanism of spawning. 6170
- Asterias forbesi**,
alkyl glyceryl ether biosynthesis. 5044
feeding rate, effects of temperature, seasonal variations. 8710
intercellular communication between embryos cells. 7109
- Asterias hispidus**, taxonomy. 5046
- Asterias rubens**,
breeding in the White, Barents, Norwegian and European Seas. 2037
distribution of *Pariambus typicus* var. *inermis* on, British Isles. 7796
electrophysiology of radial nerve cord. 4180
osmoregulation in distilled water. 6169
- Asterina**, softening of calcified tissues. 6168
- Asterina gibbosa**,
innervation of genital duct. 7110
intragonadic germinal potentialities. 5045
- Asterionella**. 3738, 4486
inhibition of synthesis by *Prorocentrum*. 6798
uptake of phytoplankton in growth. 5503
- Asterionella formosa**. 6616
drought resistance and dispersal. 5663
- Asterionella japonica**. 5503
bloom, Bay of Bengal. 1655
- Asterocheres jeanyeatmanae** sp.n. Chesapeake Bay. 5956
- Asteroida**, checklists for Tasmania. 4187
- Astrocentrina**, new records. 3933
- Astroconger mycristaster**, efferent system of lateral-line. 5437
- Astronesthes cyaneus**, ecology, Arabian Sea. 8093
- Astrosclera**. 3911, 6871
- Astrosopus**. 5220
- Astrostole scabra**, distribution, Tasmania. 279, 4187
- Aulopus zeteri**, toxin, Panama. 8745
- Auregatis floridus**, distribution, Pacific. 6056
- Atheresthes stomias**, distribution, Sea of Okhotsk. 7349
- Atherina**, systematics, ecology. 3040
- Atherina mochon**, distribution, Dutch coast. 6550
- Athiorhodaceae**, distribution, swamps. 7574
- Akinsiella dubia**, cell wall structure. 1116
- Anta**, larval organogenesis. 7846
- Antarctic Ocean**,
Canada, fish. 2951
Conchoecia haddoni. 3419
Diacria quadridentata f. *danae*. 2751
Eastern tropical, Entomotraca. 3986
Justitia longimana, phyllosoma larvae. 3402
migration of *Thunnus alalunga*. 2305
North, *Histioteuthidae*. 3484
North, *Physetocaris micropthalma*. 3375
North, xencongrid larvae. 454
Northwest, *Pelosclex dukei* sp.n. and *P. aculeatus* sp.n. 3349
Northwest, phytoplankton. 1656, 1658
Northwest, primary production. 1677
Northwest, zooplankton. 1661, 1662
organic production of zooplankton. 1678
paleoclimatology. 3880
Porifera of the Vema Seamount. 2576
postlarval Sudis. 3046
Schmidt-Ott Seamount area, hydrology. 3745
South, *Hannaites* gen.n. (Eocene). 3814
- Umbellulidae**. 3937
- Western tropical, 3 new *Dactyloscopidae*. 888
- Atmospheric conditions**, effect of oscillation of Kuroshio Front on fishing industry, Sea of Japan. 8201
- Atolls**, Roca Atoll, Foraminifera. 1831
- ATP**,
concentration, effect of shock in *Tetrahymena* respiration. 1159
respiration control, *Strongylocentrotus*, *Misgurnus*. 5053
- ATPase**,
activity in glycerinated oyster adductor. 744
bladder, turtle. 5152
Carassius auratus. 5325
characterization, *Squalus acanthias*. 5218
effect of prednisolone-bis-guanyldrazone, heart, frog. 7995
Elodea canadensis. 3867
frog skin. 7963
gastric mucosa, *Bufo spinulosus*. 7957
gills, *Salmonidae*. 7276
role in response of *Artemia* to salinity changes. 2628
- ATP:arginine phosphotransferase**, *Homarus vulgaris*. 8583
- Atractolytocyclus huronensis**, triploidy, parthenogenesis. 5885
- Atractotrema sigani**. 5880
- Atractotrematidae**. 5880
- Atraiphos eastropas** sp.n. from tropical eastern Pacific. 821
- Atrina pectinata**. 4575
- Atrioplanaria**. 4850
- Atrophonysia intertidalis**, Madagascar. 2730
- Atyidae**, New Caledonia. 7750
- Auchmeronema thysi** gen. et sp.n. Africa. 4862
- Auchmeronema williamsi** gen. et sp.n. Africa. 4862
- Audition**,
Chelonia midas. 2891
Ictalurus nebulosus. 3002
- Auditory organs**, electrophysiology of isolated labyrinth, *Lampetra fluviatilis*. 6357
- Aulacocephalus temminckii**, distribution, Andaman Sea. 4399
- Aulacodiscus hustedtii** sp.n. 5664
- Aulacodiscus subrimosus**. 5664
- Aulacomya magellanica**. 6145
- Aulostoma chinensis**. 5427
- Aulostomidae**. 5427
- Aurelia**. 4833
- Aurelia aurita**, podocyst formation. 2580
- Aureobasidium pullulans**. 5798
- Auricula machutchoniae** sp.n. 5656
- Aurila convexa**. 7812
- Aurospira**. 5489
- Australia**,
Anisops spp. 214
Central Victoria, Permian marine fauna. 3183
Centropagidae. 3995
Climacograptus bicornis with modified basal assemblage. 1853
Daphniopsis pusilla. 1881
Decapoda. 1939
eastern, *Pleurobranchomorpha*. 2769
fur seals. 3547
Murray River, *Hirudinea*. 3972
Murray River, turbellarian on *Chelonia*. 1864
New South Wales, *Aphrophylum rugosa* from Lower Carboniferous. 1852
Parastacidae. 3391

Australia, contd.

- possible sergestid larval records. 213
- Spongillidae. 3910
- Victoria, calanoids in athalassic saline waters. 2632
- W.A., Shark Bay, prawn fishery. 2670
- W.A., Shark Bay, prawn fishery model. 2666
- Western Victoria, radio carbon dating of lake deposits. 1759
- Australorbis glabratus**, bioassay, dinitrostyrenes. 6103
- Austria**,
 - fossil Hydrozoa of the northern limestone Alps. 630
 - Neusiedlersee, benthic communities. 3088
- Austroatherina incisa**. 6866
- Austrodecus sp.** 8634
- Austrolycus**, southern Chile. 886
- Austroperlidae**, taxonomic revision. 707
- Austropotamobius pallipes**,
 - ion movements, antennal gland. 6962
 - setae. 2643
- Autogamy**, during conjugation in *Paramecium caudatum*. 103
- Autogeny**, *Culicoides furens*. 4101
- Automation**, fishing industry. 3584
- Autoradiography**, localization of [^3H]thymidine in macronucleus of *Paramecium aurelia*. 5849
- Autospore number**, as effected by light in *Scenedesmus* and *Chlorella*. 1055
- Auxis**. 7377, 9010
 - comparative electropherograms. 6492
 - electropherograms. 6492
- Auxospores**, formation in pennate diatoms. 542
- Aves**, 8086
 - botulism, Kern River. 3543
 - effects of oil pollution. 8015
 - Hawaii. 3542
 - pollution, oil, British Isles. 7461
 - relation to land use and water levels, production, USA. 8818
 - sea bird pollution. 6688
 - susceptibility to plague virus. 7209
 - treating oiled seabirds, British Isles. 8815
 - use of shores and coasts, Salton Sea. 7206
 - water fowl botulism, California. 8814
- Avicennia**. 7596
- Avrainvillea**, Japan. 5694
- Axinella**. 4824
- Axinella agnata**. 3904
- Axinella artica**. 3904
- Axinopsis**. 7440
- Axiognathus squamata**. 7119
- Axolotl**, (see also *Ambystoma*)
 - discussion of term. 290
 - locomotion. 2846, 2864
- Axon**, effect of cholinesterase inhibitors in squid. 267
- Axonolaimus orcombensis sp.n.** 5921
- Azoester**, *Hydra* as biological amplifier for testing. 1167
- Azogocypridina imperator**, description. 4094
- Azolla**. 8233
 - ecology in North Somerset. 3868
 - fossil, from the Galapagos Islands. 1131
- Azotobacter chroococcum**, N_2 -fixation in mixed culture. 592

B

- Bacillaria**, ultrastructure. 7496
- Bacillariophyceae**. 6599, 7434, 7488, 8284
 - Cayler Prairie. 5645
 - Chlorophyceae. 3740
 - physico-chemical conditions of deposition, Oregon. 6741
- Bacillus**. 3462, 3769, 5716, 5772, 6679
 - MnO_2 -reductase system. 6804
- Bacillus cereus**. 8871
- Bacillus subtilis**, inhibition in stored products. 5191
- Bacillus subtilis var. niger**, tracing sewage dispersion. 1720
- Bacteria**. 6679, 7467, 7574, 7633
 - abyssal zone. 5771
 - activated sludge treatment plant. 3145
 - algalicidal properties of *Cytophaga N-5*. 594
 - allochthonous, from river to sea. 1822
 - and pollution, *Salmo* and *Catostomus*. 2408
 - antibacterial agents stabilized. 5795
 - bactericidal response of *Panulirus interruptus*. 1269
 - bactericides. 6733
 - bactericides in polluted water. 3773
 - bacteriophages active against fish spoilage and fish-pathogenic pseudomonads. 1107
 - behaviour of pure cultures. 5787
 - biodegradation of organic waste. 5793
 - blooms. 9058
 - cation-activated nucleotidase in cell envelopes. 1095
 - cave flora, British Isles. 6800
 - classification of flexibacteria. 1103
 - coliforms, bactericidal properties of digested sludge. 73
 - coliforms, evaluation of water quality. 3150
 - coliforms, medium for enumeration. 1111
 - coliforms, rate of sedimentation. 72
 - coliform test, optimum temperature. 500
 - Columnaris disease, aquaculture. 5432
 - contamination, Lemna minor. 4786
 - control of *Salmonella*. 6340
 - Crassostrea virginica*. 3462
 - counts, *Gadus*, *Hippoglossoides*. 5187
 - culture and isolation. 5786
 - decomposition of organic matter, Vyalozero. 6610
 - degradation of crude oil. 6689
 - destruction of microflora in soil by sea-water flooding. 5796
 - distribution, Tyrrhenian Sea. 5791
 - distribution, water and sediment, Iceland-Faroe Ridge. 4751
 - diversity, Mediterranean, Black and Red Sea. 5769
 - DNA base composition of flexibacteria. 1101
 - ecological factors, Danube. 3752
 - ecology, Bay of Naples. 5790
 - ecology, Kuroshio current. 5773
 - ecology of marine nitrifying species. 5779
 - effect of aeration of waters on growth. 1821
 - effects of antibiotics on algal cultures with bacterial associations. 1094
 - effects on *Turbanella hyalina* in intertidal environment. 5536
 - enteritis-coli, Saale. 7571
 - epidemic in frogs. 1814

bacteria, contd.

- estimations of growth rates in natural waters. 1106
- factors affecting flocculation. 1701
- food irradiation. 8412
- gas vacuoles, structure. 3204
- genetic control of radio-resistance. 5716
- geomicrobial activities. 5774
- German Lakes. 1809
- gnotobiotic environment, freshwater communities. 3726
- growth rates above 90°C, Yellowstone hot springs. 593
- Gulf of Trieste. 7565
- heterotrophic, Swedish Lakes. 1808
- hydrocarbon distribution. 2548
- in *Procambarus*. 1273
- in shellfish, Mexico City. 242
- in water supplies, chlorination effects. 1700
- inorganic salt requirements, marine vs terrestrial. 5776
- intestinal, *Cyprinus*. 6459
- iron, polluting ground water supplies. 69
- iron, quick culturing and control. 993
- isolation and identification. 7569
- isolation, cultivation and characterization of flexibacteria. 1100
- isolation from *Porites*. 2582
- lactic acid. 4665
- Lake Balaton. 7563
- Lake Constance, Switzerland. 1699
- limnic, nutritional classification. 1813
- Manaus, Brazil. 983
- marine, denitrifying, Maizuru and Wakasa Bays, Japan. 70
- marine, nitrification in low substrate and O₂ concentrations. 1810
- marine, precipitating calcium carbonate. 1812
- marine vibrios pathogenic to fish. 1113, 1114
- Marsala. 4517
- Mediterranean. 6679
- methane oxidizing, Pluss Lake. 3292
- mineralization process, mesotrophic lake. 5775
- model for activated process. 4550
- MPN tests for faecal streptococci in seawater. 1002
- mussel cultivation sites, Germany. 3459
- nitrifying, coastal environment. 5780
- nitrofurantoin derivative as food preservative. 3295
- numerical taxonomy of flexibacteria. 1104
- of bivalve algal foods. 2786
- optical density of marine pseudomonad suspensions. 2551
- organic substrates. 6807
- pesticide detection. 3162
- pink-pigmented, Baltic Sea. 3291
- planktonic, food chains, Black Sea. 6595
- planktonic, quantitative study, littoral zone, Lake Balaton. 7564
- population dynamics in fish farms, USSR. 4282
- population of poultry waste. 6806
- preservation by vacuum drying. 7570
- prevention of growth in organic materials and water. 6801
- production of vitamin B, Japan. 8404
- psychrophilic, distribution among fish and shellfish. 1112
- recurrent group analysis in classification of flexibacteria. 1102
- relationship with phytoplankton, Belorussian lakes. 6622
- reliability of data from direct counters. 5783
- rice fields. 7578
- role in iron system, Krasnoje lake. 5785
- role in phosphorus and nitrogen cycle, Gulf of Marseilles. 4534
- Ross Barnett Reservoir, USA. 990
- seasonal dynamics, Narochan Lakes. 2556
- seasonal variations, Louisiana. 7566
- secondarily screening xylan-decomposing bacteria by phenol-sulphuric acid method. 1099
- sedimentary, Bras d'Or Lake. 7568
- soil, colour problem in distribution systems. 3294
- sulphate-reducing, method for controlling growth with methylene bithiocyanate or monohalomethyl thiocyanate. 1016
- sulphur bacteria in sewage treatment. 6805
- sulphur bacteria, reservoirs, South Crimea. 3308
- total, Black Sea water. 4529
- type E botulism, home-canned gefilte fish. 1816
- uptake of dissolved organic compounds, respiration corrections. 1098
- uptake of organic substrate. 3293
- use of phytol as carbon source, Mud Lake, Florida. 4754
- variations of marine species. 5777
- vertical distribution, Baikal Lake. 4753
- vertical distribution, Lago do Castanho. 5527
- Bactericides**. 5192, 7483, 9138
 - effects of higher plants. 2563
 - in *Homarus americanus*. 1915
 - patent. 1120
 - properties of algae. 519
 - responsible microorganisms in water. 3296
- Bacteriophages**, (see also **Viruses**)
 - active against fish spoilage and fish-pathogenic pseudomonads. 1107
 - host range of phages active against *Pseudomonas putrefaciens*. 1108
- Baetidae**, origin and evolutionary tendencies. 4098
- Baetis**, embryology. 4982
- Baetis rhodani**, ultrastructure of longitudinal muscles of abdomen of larvae. 7009
- Bagarius bagarius**, integument. 2993
- Bagridae**, from Japan, China, Malaya and Indonesia. 394
- Bahamas**,
 - shallow-water Mysidacea. 694
 - Thalestridae (Copepoda). 669
- Baicalasellus**. 8568
- Baikowia**. 7546
- Bait**. 8057
 - hook avoidance, *Esox lucius*. 5267
 - manufacture. 8058
 - manufacture of fish bait. 4271
- Balaena gracilis**,
 - North Pacific. 2898
 - skull, Kisagata shell bed. 2899
- Balaena mysticetus**, distribution, Osaka Bay. 8838
- Balaenoptera**,
 - purification of pancreatic proteases. 4257
 - strontium and caesium level in tissues. 6302
 - vaginal band. 2900
- Balaenoptera acutorostrata**. 7218
 - stocks, Antarctic. 8839
- Balaenoptera borealis**,
 - feeding on *Parathemisto gaudichaudii*. 8593
 - karyotype of male. 6314
 - muscular carnosine. 788
 - population estimates, Antarctic. 8840
 - sword-fish sword, Pacific. 8842

- Balaenoptera brydei**, parasitism of *Cetitrema folii*-formis gen. et sp.n. in liver. 5887
- Balaenoptera musculus breviceuda**, skeleton. 8843
- Balaenoptera physalus**. 8987
- fatty acid amide. 8987
- morphology and meristics. 330
- parasitism by *Ogmogaster grandis* sp.n. Antarctica. 6904
- Balance organs**,
- influence of quinine on ears, frog. 8791
- Octopus vulgaris*. 7904
- statocyst, transplantation, *Loligo*. 3485
- Balanides**. 9058
- Balanoglossus spp.** 8727
- Balanus**. 3314, 4900
- biometrics. 1893
- parasites and diseases, New York. 4901
- photoreceptor membrane. 672
- settling, vertical distribution, Genoa harbour. 6955
- Balanus amphitrite**, distribution, Netherlands. 3368
- Balanus amphitrite** var *stutsburi*, India. 174
- Balanus balanoides**. 7441
- antennular attachment organ of cypris larva. 170
- circulatory mechanisms. 8550
- distribution, New York Harbour. 4020
- France, Atlantic coast. 2637
- larval structure and metamorphosis. 171
- temperature tolerance. 4018
- Balanus balanus**,
- oxygen consumption and effect of temperature. 1892
- sperm ultrastructure. 7735
- Balanus crenatus**, temperature tolerance. 4018
- Balanus eburneus**,
- Constanza. 4529
- distribution, New Jersey. 4020
- Balanus improvisus**. 6152, 7089, 7431, 9069
- Constanza. 4529
- ecology, Mecklenburg. 8551
- West coast of North America. 4017
- Balanus nubilis**,
- absence of sterol biosynthesis. 7758
- muscle cell permeability. 4902
- permeation of non-electrolytes through single muscle cell. 169
- Balanus perforatus**,
- sperm ultrastructure. 7735
- spermiogenesis. 3366
- Balanus tintinnabulum**,
- cement apparatus. 1894
- distribution, California. 6954
- Balanus tintinnabulum clippertonensis** subsp.n. Mexico. 4903
- Balantidium**. 7623
- Balantidium elongatum**, mucocyst genesis. 4806
- Ballia**. 4705
- Baltic Sea**,
- new budding bacterium. 3291
- new stations for *Bufo calamita*. 295
- observations on *Monostroma*. 44
- plankton and hydrography after cold winter. 1651
- Polish, ecology and biology of *Jaera albifrons*. 1254
- productivity and pollution. 3159
- Balticima finmarchica**, porphyrins. 5876
- Bangia atropurpurea**, distribution, Lake Erie. 6785
- Bangia fuscopurpurea**,
- photobiology. 8379
- pit connections. 7538
- Barbantus elongatus** sp.n. tropical Central Atlantic. 8900
- Barbatia (Ustularca) aizoi** sp.n. Japan. 2005
- Barbatia (Coraliarca) tamikoe** sp.n. Japan. 2005
- Barbatula toni**. 3633
- Barbus**. 8513
- Barbus barbus**. 8887, 8934
- Barbus holubi**. 3636
- Barbus meridionalis**. 8934
- Barbus meridionalis petényi**. 8887
- Barents Sea**,
- aggregations of hydromedusae. 3331
- breeding of *Asterias rubens*. 2037
- Barentsia**, spirally-arranged subunits in A-filaments. 282
- Barentsia gracilis**, ultrastructure of muscle fibres. 3947
- Bathyclupea argentea**, first record, Gulf of Mexico. 924
- Bathylaco krefftii** sp.n. Atlantic Ocean. 8901
- Bathymyrus**. 9014
- Bathynectes superba**, larval development. 5995
- Bathyporeia**, respiration. 5996
- Batrachia**, distribution, Madagascar. 3509
- Batrachium**, hybrids. 4792
- Batrachospermum**,
- adaptations against mechanical damage, Brazil. 8380
- differentiation of thallus. 3264
- Batrachylodes spp.n.** Solomon Islands. 6209
- Bdellovibrio bacteriovorus**, parasitic. 3296
- Beauvericium**, structure. 1208
- Bêche-de-mer**, see *Holothuridae*.
- Bedsonia**, incidence, *Lepomis macrochirus*. 3661
- Behaviour**,
- Acanthomysis sculpta*. 5989
- Acmaea digitalis*. 7028
- activity rhythms *Blennius* spp., Mediterranean. 4402
- actograph. 6268
- adaptations of intertidal molluscs. 2010
- aggregation, *Taricha granulosa*, Oregon. 4243
- agonistic, *Aratus*, *Goniopsis*. 3383
- agonistic, *Betta splendens*. 4400
- agonistic, effect of shell size and weight, *Clibanarius vittatus*. 6010
- agonistic, *Gasterosteus aculeatus*. 2320
- agonistic, *Gonodactylus bredini*. 8580
- agonistic, *Orconectes virilis*. 1924
- agonistic, *Tilapia*. 6527, 8186
- agonistic, *Trichopsis vittatus*. 7374
- alarm reactions, *Brachydanio rerio*. 5319
- ambivalent, *Reinhardtius hippoglossoides*. 7417
- associations of *Callinectes* and crabs. 5863
- avoidance of being caught, *Cyprinus carpio*. 8958
- avoidance of ship due to noise, *Gadus*, *Melanogrammus*. 8972
- behavioural genetics, sticklebacks. 4451
- blennoid territorial combat wounds serving as sites for lymphocystis infection. 895
- brooding, *Tilapia*. 8186
- burrowing, *Culaea inconstans*. 5441
- burrowing, *Phyllactis*. 8474
- camouflage, *Acanthopterygii*. 6486
- case building, *Potamophylax latipennis*. 6087
- chemical memory transfer in *Carassius*. 866
- chemical signals and nest-building, *Colisa*. 6495
- chorus structure, *Hyla meridionalis*. 7161
- chromatic, *Macropodus opercularis*. 3665
- chromatic, *Octopus vulgaris*. 6160
- chromatic, *Uca pugnator*. 6052
- Coeloplana willeyi*, Japan. 4840
- colour preferences, *Rhithropanopeus harrisi*. 6991
- communication of velocity changes in *Trachurus*

Behaviour, *contd.*

- symmetricus, 9006
 conditioning, *Carassius auratus*, 3630
 conditioning, *Gnathonemus petersii*, 5452
 coordination, cilia, *Paramecium*, 5847
 courting, *Katsuwonus pelamis*, 7376
 courtship, *Tilapia melanotheron*, 3671
 covering response, *Evechinus chloroticus*, 8717
 crawling-tracks, infected *Macoma balthica*, 6140
 creative behaviour, *Steno bredanensis*, 7228
 cultures, bacteria, 5787
 cutaneous mechanoreceptors, *Anas platyrhynchos*, 7120
 cyst-inducing and blocking agents, *Schizopyrenus russelli*, 4818
 'defence' response, *Arctonoe vittata*, 135
 defensive, conditioned reflexes, use in fisheries, *Oncorhynchus keta*, 8912
 Demospongiae, 6872
 detachment, *Calliactis*, 4836
 differences, *Thunnus alalunga*, North and South Hemispheres, 7382
 discrimination between tones, *Salmo gairdneri*, 5282
 dispersion patterns, salamanders along brook, 4218
 displacement, *Gasterosteus aculeatus*, 7395
 diurnal rhythm, *Gyrodinium dorsum*, 7558
 diurnal rhythm, *Hemigrapsus edwardsi*, New Zealand, 3397
 diurnal rhythm, invertebrate drift, 1949
 diurnal rhythm, *Penaeus semisulcatus*, 7800
 drifting activity, water mites, 6090
 echolocation, *Delphinus delphis*, 8029
 effect of flow on performance, *Oncorhynchus tshawytscha*, 6423
 effect of ionic mechanism in *Paramecium*, 101
 effects of thermal pollution, Columbia River, 5280
 efference copy for eye movements, *Carassius*, 3628
 Elasmobranchia, sound responses, Bahamas, 4296
 electrical responses, *Spirostomum*, 7645
 electrophysiology of isolated labyrinth, *Lampetra fluviatilis*, 6357
 embryonic, of *Mysis relicta*, 1261
Emys orbicularis, Poland, 4253
 environmental preferences in *Sternarchus*, 420
Erpobdella punctata, 4873
 escape response of *Anthopleura nigrescens* to *Hervilla*, 245
 escape response waning, *Procambarus clarkii*, 8601
 feedback mechanisms, motivation, *Gasterosteus aculeatus*, 7395
 feeding, *Heterandria formosa*, 6464
 feeding, discharge, *Torpedo marmorata*, 5220
 feeding hierarchy, *Rana pipiens*, 8776
 feeding in medusae and *Chaetognatha*, 629
 feeding, *Pandalus jordani*, 6980
 feeding, spawn eating, tadpoles, *Rana*, *Bufo*, 6265
 feeding, *Tealia felina*, 7677
Feresa attenuata, southern African, 6304
 fish, echo sounding, 5180
 fish, neural regulation, 2918
 flight, in *Bufo viridis*, 2054
 flume for study of marine fish, 1726
 foot withdrawal, *Ensis directus*, 7080, 7081
 form recognition in *Cyprinus carpio*, 404
 formation of defensive reflexes, *Rutilus rutilus* larvae, 8968
 genetic control of differences, species of *Xiphophorus*, 6591
Gymnodinium breve, 3288
 habitat selection, *Acanthurus triostegus sandvicensis*, 3022
 habituation, stellate ganglion, *Loligo*, 3487
 habituation, withdrawal response in *Nereis*, 656
Homarus americanus, 6022
 home range, *Rana catesbeiana*, Ontario, 3511
 homing, *Pisces*, 7266
 homing, *Salmo clarki*, 379
 homing, *Siphonaria normalis*, 8668
 hook avoidance, *Esox lucius*, 5267
 host location, *Schistosoma mansoni*, 5918
 increase in photoperiod, ovary, *Heteropneustes fossilis*, 8141
 inhibitory effect of prey-dummies on prey-catching of *Bufo*, 294
Jasus lalandii, 193
 lactation, Cetacea, 2907
 learned, *Aplysia vaccaria*, 2002
 learning, *Carassius*, 3627
 learning, *Octopus*, 8690
 light effects, *Ambystoma opacum*, 4215
 light effects, atrophy in darkness, 4842
 light effects, *Clupea harengus*, Atlantic, 8905
 light effects, *Clupea harengus*, North Sea, 5262
 light effects, *Cololabis*, 8202
 light effects, copulation, *Dendrocoelopsis ezensis*, 4856
 light effects, food intake, *Tilapia rendalli*, 6529
 light effects, gonad development, *Gasterosteus aculeatus*, 6561
 light effects, isolated iris, *Rana*, 4226
 light effects, lateral inhibition of retina, frogs, 6250
 light effects, *Lota lota*, 8976
 light effects, melanophores, hormone treatment, 4247
 light effects, optic system, *Emys orbicularis*, 5144
 light effects, *Salmo*, *Ambloplites*, *Ictalurus*, *Lepomis*, 5223
 light effects, *Salmo gairdneri*, 4339
 light effects, *Salvinia natans*, 4774
 light effects, *Schistosoma haematobium*, parasite in *Bulinus*, 5916
 light effects, solar eclipse, zooplankton, Gulf of Mexico, 9053
 light effects, spectral sensitivity, *Hydra carnea*, 4844
 light effects, tolerance, *Mysis relicta*, 6032
 light effects, vertical migration, *Chaoborus punctipennis*, 4099
 low frequency sounds, sharks and groupers from Bahamas, 4296
 Majidae, 4055
 males, *Macropodus opercularis*, 8994
 mating, *Melichthys niger*, 5455
 mechanical stimuli, *Dileptus*, 7634
 mechanical stimuli, *Paramecium caudatum*, 7642
Micropterus dolomieu, Snake River, 7367
 motor patterns in contact of parents, *Etroplus maculatus*, 8988
 nest-building, chemical signals, *Colisa*, 6945
 nesting, *Branta canadensis*, 6301
 noise effects, *Clupea harengus*, Baltic seas, 5263
Notonecta, alarm ventilation, 3426
 oculomotor reactions, *Sepia officinalis*, 5040
Octopus cyanea, 5036, 8694
Ocythoe tuberculata, 3490
 odour discrimination, *Carassius auratus*, 8946
Oncorhynchus nerka, Alaska, 6413

Behaviour, contd.

- operant conditioning in determination of salinity tolerance, *Salmo gairdneri*. 7283
- orientation, *Bufo boreas*. 3505
- orientation, *Carassius*. 3631
- orientation, planktonic Crustacea. 3716, 3717
- orientation, sun-compass, *Gambusia affinis*. 9032
- Paramecium caudatum*. 7642
- Paramecium* in gravity fields. 104
- Patina on *Laminaria*. 727
- Pelmatochromis ansorgii*. 7368
- photo-electrical response, retina in vacuum. 6249
- photoperiod effects, *Daphnia*. 5950
- photoperiod effects, *Heteropneustes fossilis*. 8143
- photoperiod effects, ovary, *Heteropneustes fossilis*. 8142
- photoperiodicity, moulting, *Hemigrapsus nudus*. 7769
- photoperiodicity, *Salvinia natans*. 5815
- photoperiodicity, xanthophores, *Oryzias latipes*. 5459
- photoresponse, *Gyrodinium dorsum*. 7557
- pinealectomy, *Carassius auratus*. 5322
- Pinnipedia. 7225
- Pisces, effects on fishing industry. 8055
- polyps, *Gonionemus vertens*. 6892
- posing, *Uca tangeri*. 6996
- prey-catching, visual inhibition, *Bufo bufo*. 6212
- protective, *Amphiprion xanthurus*. 5387
- protective, *Bullia melanoides*. 7034
- protective, *Heterocentrotus*. 3496
- protective, *Notonecta*. 3426
- protective, parental recognition by larvae, *Ectoparus maculatus*. 6497
- protective, steroids, *Ilybius fenestratus*. 6083
- protective, steroids in defensive secretions, Coleoptera, India. 6076
- Pseudopleuronectes americanus*. 2331
- quantitative effect of releasers on attack-readiness of *Haplochromis burtoni*. 434
- queuing, *Panulirus argus*. 196
- Rana pipiens*. 4234, 4235
- reaction of intestine to stress, *Cyprinus carpio*. 6461
- recognition by auditory cues, *Sterna hirundo*. 8023
- recognition of parents by young, *Ectoparus maculatus*. 6497
- recognition, Trichoptera. 8609
- reflexes, *Rana* spp. 6256
- relation to coloured lights, *Pseudorasbora parva*. 6477
- relation to moving net, *Penaeus japonicus*. 8595
- reproductive and parental, *Ambystoma dumerili*, Mexico. 8744
- reproductive and parental, *Anas*, California. 8817
- reproductive and parental, *Hemirhamphus marginatus*, Gulf of Mannar. 4454
- reproductive and parental, *Leuresthes tenuis*, copulatory cue. 4462
- reproductive and parental, migrations, Gulf of Guinea, *Thunnus albacares*. 4439
- reproductive and parental, *Panulirus homarus*. 3417
- reproductive and parental, *Pelmatochromis ansorgii*. 7368
- reproductive and parental, *Porichthys porosissimus*. 4471
- reproductive and parental, *Pungitius pungitius*, Ontario. 4476
- reproductive and parental, spawning behaviour, *Lampetra planeri*, Oregon. 4288
- reproductive and settling, *Mytilus edulis*. 6146
- reproductive, changes, after irradiation, *Lebistes*. 4459
- reproductive, *Cololabis saira*, Japan Sea. 8199
- reproductive, courtship, *Tilapia melanotheron*. 3671
- reproductive, effects of concanavalin A on mating reaction, *Chlamydomonas*. 8332
- reproductive, egg-laying, *Pacifastacus trowbridgii*. 7792
- reproductive, *Gasterosteus wheatlandi*. 928
- reproductive, *Glossogobius olivaceus*. 8170
- reproductive, *Perca*, *Leuciscus*, Baykalian lakes. 8997
- reproductive, *Phyllomedusa*, Mexico. 7163
- reproductive, *Pungitius pungitius*, Ontario. 5470
- reproductive, *Puntius titteya*. 5344
- reproductive, spawning, *Gadus merlangius*. 8974
- response of *Octopus* to automatic food dispenser. 271
- response to salinity change in *Leiostomus* and *Micropogon*. 897
- rhythmical, *Anodonta cygnea*, Unio. 7071
- role of telencephalon, *Carassius auratus*. 8948
- role of telencephalon in conditioned avoidance responses, *Carassius auratus*. 8941
- schooling, in salmon. 366
- schooling, influence of dissolved oxygen and carbon dioxide, *Engraulis mordax*. 6391
- schooling, *Lutianus monostigma*, Aldabra. 7366, 8176
- sensory deprivation. 6382
- sexual, unusual aspects of in *Rana a. aurora*. 304
- sharks. 5207
- social behaviour, tactile stimuli, *Pagurus*. 3370
- sound and postures, *Trichopsis vittatus*. 7374
- sound production, *Grampus griseus*. 4259
- sound production, *Leucaspius delineatus*. 6401
- sound production, *Pseudophryne semimarmorata*. 8759
- sound production, *Xenopus laevis*. 6291
- sound stimuli, *Clupea harengus*, Baltic Sea. 8903
- spawning behaviour, *Theragra chalcogramma*, Bering Sea. 8979
- spectral sensitivity, *Rana catesbeiana*. 8764
- spermatozoa, *Tubularia*. 6897
- Spirostomum, under high hydrostatic pressure. 625
- statistical, Teleostei. 7307
- Stercorarius parasiticus*, Arctic. 8022
- stimulus control, *Carassius auratus*. 7300
- substrate discrimination, *Pectinatella magnifica*. 7134
- substrate selection, *Microhedyle milaschewitchii*, Yugoslavia. 6116
- subthreshold, giant axon, *Todarodes sagittatus*. 7104
- swimming, chum salmon, Japan. 5273
- swimming depths, *Thunnus albacares*, Pacific Ocean. 9009
- symmetrical hermit crab, *Mictopagurus* sp.n. 7786
- temperature adaptation, *Carassius auratus*. 6449
- temperature effects, *Alosa sapidissima*. 6381
- temperature effects, *Carcinus maenas*. 6008
- temperature effects, gonad development, *Gasterosteus aculeatus*. 6561
- temperature effects on discharge mechanisms, electric organ, *Torpedo*. 6370
- temperature effects on food intake, *Tilapia rendalli*. 6529

- behaviour, contd.
- temperature effects on oxygen consumption, *Crepidula fornicata*, 6108
- temperature effects, Pisces, 8037
- temperature effects, pollution, water discharge, power station, 4395
- temperature effects, Protozoa, Potomac River, 4802
- temperature preferences, *Poecilia reticulata*, 7414
- temperature regulation, *Rana catesbeiana*, 4220
- temperature selection, hypophysectomized *Carassius auratus*, 6447
- territorial, *Lottia gigantea*, 5006
- territorial, *Pelmatochromis ansorgii*, 7368
- territorial, Periophthalmidae, 4424
- territory protection, *Tilapia*, 6527
- threshold responses, electrotactics, *Amoeba proteus*, 7632
- Tilapia tholloni*, Stanley Pool, 5420
- Tylos latreilli*, 701
- Tylos punctatus*, 700
- uptake of protective substances from anemone by anemone fish, 7348
- upwelling effects of distribution, *Thunnus* spp, Baja California, 9011
- vibrational signals, *Uca* spp, 7810
- vocalization, bottlenosed dolphins, 5154
- white and infrared illumination for photographic observation, *Penaeus duorarum*, 6041
- yawning, Teleostei, 8980
- zonation of trochids under artificial tide, 6118
- grium,
- Bornem, 'Kragewiel', limnology, 3740
- Bornem, 'Vieil-Escaut', limnology, 3739
- 'Broek de Overmere', limnology, 3737
- Cladocera of Limburg, 665
- Dyle Valley, algae of 2 ponds, 971
- fossil fish, 792
- hydrobiology of maritime basin, Ostend, 491
- 8 new copepods, 671
- Ostend, port of, plankton study, 950
- phytoplankton from maritime basin, Ostend, 493
- Protista from coast, 492
- one argalus, 5438
- one belone, 5163
- one crocodila, 5438
- onidae, 8488
- saxonomy, 5438
- ostoma indicum, digestive systems, 1950
- chopecten spp.n., New Zealand, 4181
- thos, (see also Ecology)
- 5943, 6411
- abundance, River Danube, 8435
- Algae, Akhult Mire, Sweden, 6724
- Algae, culture, 9104
- Algae distribution, Caribbean Sea, 4581
- Algae, Washington, 8282
- algal blooms, Lake Constance, 4586
- asellidae, Saône, 5992
- assessment of production, 2453
- associations, Helgoland Bight, 2399
- acteria, Iceland-Faroe Ridge, 4751
- acteria, taxonomy, distribution and function, 5772
- altic Sea, 5541, 5544, 5546
- Calanoida, Massachusetts, 5953
- Calanus, Sea of Japan, 6945
- Chironomidae, Laurel Creek Reservoir, 7819
- Ciliata, Lake Orta, 2568
- clam bed, Hachinohe coast, Japan, 497
- comparison of oxygen consumptions, temperate and tropical fish, 8192
- continuous measurement of buoyancy, 8680
- copepod substrate specificities, 4891
- culture, requirement of oscillating water movement, 5860
- determination, Lake Chad, 4512
- development, Volta Lake, 3724
- distribution, Barents Sea, 5542
- distribution, Great Australian Bay, New Zealand, 6634
- dredges, 9103
- ecology, decline, Lubeck Bight, 5545
- ecology, False Bay, South Africa, 8241
- ecology, Ivory Coast, 5548
- ecology, Stewart Island, 4527
- effects of thermal pollution, Cape Cod Canal, 5584
- effects of thermal pollution, Oklahoma, 9086
- effects of waste water discharge, California, 9090
- Emerita analoga recruitment, USA, 7762
- fauna, 7817
- fauna of marine sediments, British Columbia, 7440
- feeding behaviour of *Hyalella azteca*, 6026
- Foraminifera, Pacific, 5511
- fouling organisms, Baltic canal, 6624
- freshwater environment, Germany, 7435
- Indian Ocean, continental shelves, 5540
- infauna, Chile Bay, 4528
- invertebrate fauna, freshwater, 3941
- invertebrate life cycles, Pickerslough, 5530
- Korang stream, Pakistan, 1681
- Lake Baikal, 6931
- Lake Vättern, Sweden, 1683
- Lake Volta, 4514
- logarithmic series and lognormal distribution, 3125
- Lower Sabine River, Texas, 1682
- macrofauna, of the mainland shelf, S. California, 496
- macroinvertebrates, diversity index, 8437
- marine algae, Washington, 6728
- meiobenthos, Bermuda, 6633
- meiobenthos, Bermuda shelf, 6628
- meiobenthos, weight characteristics, deep-sea trophic region, Pacific Ocean, 6630
- microflora, utilization by *Hyalella azteca*, 6974
- Mollusca, Lake Chad, 7838
- Mysidacea, Japan, 7743
- Neusiedlersee, Austria, 3088
- New Zealand continental shelf, 2397
- Notholca, Lake Baikal, 6919
- of fertilized and unfertilized ponds, 2372
- oxygen uptake, 2388
- phytobenthos, Italy, 5618
- phyto-sociological analysis, marine environment, 4542
- pollutant effects, Adriatic, 7467
- pollution indication, brackish water environment, 9069
- primary production, 8226
- primary production, algae, 7486
- primary production, algal associations, 5518
- river Kokemaenjoki, Finland, 3118
- rivers, Romania, 2392
- Rogneda, Marseilles, 6908
- Rotifera, Lake Baikal, 6919
- salt marshes, North Carolina, 7612
- Sea of Okhotsk, 4958
- seasonal abundance and distribution, freshwater environment, 3736
- seasonal variations, Caspian Sea, 7431

Benthos, contd.

- sewage pollution, Florida. 6674
- stream, effect of substrate. 3110
- subalpine lakes. 7438
- submerged trees as substrate, Lake Kariba. 7818
- substrate sampling, Klamath River Oregon. 9079
- transfer of radioisotopes between detritus and benthic macroinvertebrates. 9064
- trout relationships, Finland. 5306
- use in reconstruction of environment, Bay of Biscay. 8240
- use of propylene phenoxetol for sorting. 5821
- variations, brackish water, Danube delta. 4520
- variations in marine algae, Virginia. 5733
- Vema Seamount. 6636
- zoobenthos, Mozambique Channel. 4530
- Benthosema glaciale**, vertical distribution, Northwest Atlantic. 4443
- Benzimidazoles**, microbiocidal substituted. 1742
- Berardius**. 6318
- Bering Sea**,
 - Pandalus borealis*. 2675
 - salmon movement. 3611
- Bermuda**,
 - Cyanophyceae. 1757
 - Danielssenia minuta* sp.n. and *Stenelia* (*Danielssenia*) *bermudensis* sp.n. 3360
 - zooplankton. 1665
- Berle**, culture apparatus. 5877
- Berle cucumis**. 5877
- Berle gracilis**. 5877
- Berthelinia caribbea**, ecology. 3437
- Beryx**. 5221
- Beryx decadactylus**. 5164
- Betaeus harfordi**, carotenoids. 3384
- Betta splendens**, habituation of conspecific aggression. 4400
- Biacetabulum bilculoides**. 5882
- Bibliographies**,
 - Algae, British Isles. 4578
 - Amphibia, southeast Asia. 7943
 - blood chemistry of fishes. 345
 - calcareous nanoplankton. 7424
 - cave Protozoa, Kentucky. 7622
 - Chaoborus. 8620
 - Cololabis saira. 8200
 - Cyanophyceae 1967-1968, and 1960-1966. 522
 - Henri Coutiere. 7748
 - Homarus. 7771
 - Lake Tiberias, Israel. 2462
 - Ohio zoology. 1737
 - Pisces. 8069
 - Trichoptera, Africa. 8610
 - Xanthidae, larvae. 3408
 - zooplankton samplers. 9051
- Bicarbonate ions**, effects on gastric mucosa, *Rana nigromaculata*. 5108
- Bicoeca crystallina**. 6597
- Bicoeca multiannulata**. 6597
- Biemna**. 4824
- Bile**, *Salmo gairdneri*. 860
- Bilharzia**, infection from Volta Lake, Ghana. 230
- Binuclearia**. 5800
 - variability of morphology. 3228
- Binuclearia tectorum**. 5800
- Bioacoustics**,
 - auditory masking and critical band in *Gadus morhua*. 423
 - Bombina bombina* and *B. v. variagata*. 293

Rana esculenta. 307

Bioassays

- aflatoxins, *Salmo gairdneri*. 8106
- ammonia, Diatomaceae. 9087
- antibiotics, algae. 4602
- atelopidtoxin, *Atelopus zeteri*. 8745
- Bufo marinus* toxins. 8749
- chemical pollution from sulphite cellulose factory, Finland. 6652
- ciguatoxin from *Gymnothorax*, Johnston Islands. 9033
- copper complexes, *Scenedesmus quadricauda*. 6773
- copper, phytoplankton. 9088
- copper, salmon eggs and fry. 7453
- copper, *Scenedesmus quadricauda*. 4693
- Corexit 7664, plankton. 8252
- 2,4-D, *Lepomis macrochirus*. 7447
- 2,4-D, *Poteriochromonas stipitata*. 6745
- DDT and endrin, *Pimephales promelas*. 7448
- DDT, decreased susceptibility of blackfly larvae. 7016
- DDT on G6PD, *Oncorhynchus*, *Salmo gairdneri*. 4338
- DDT on tadpoles, *Rana temporaria*. 7455
- DDT, *Oncorhynchus*. 8103
- DDT, *Oncorhynchus kisutch*. 8100
- detergents, *Littorina*. 5589
- dinitrostyrenes on *Australorbis glabratus*. 6103
- Dursban, freshwater ponds. 6654
- EDTA. 8248
- fluorescein sodium. 5228
- Fusarium tricinctum* toxin. 7586
- Gammarus oceanicus*, yellow phosphorus. 4555
- heptachlor, plankton. 9078
- herbicides, Crustacea. 9081
- herbicides, *Micropterus*, *Lepomis*, *Promelas*. 3563
- inhibitory effects of chemicals released from plastics. 6703
- larvae, pesticides, *Mercenaria*, *Crassostrea*. 6141
- linear alkylate sulphonate, *Pimephales promelas*. 6476
- marine pollutants, phytoplankton, zooplankton, Pisces. 7464
- mercury, Pisces. 7451
- metals, Chlorophyta. 7501
- natural seawaters. 6638
- NEDTA. 8248
- NTA. 8248
- NTA, phytoplankton, estuaries. 9089
- oil, aquatic plants. 7454
- oil, Polychaeta. 9102
- organic mercury compounds, *Oryzias latipes*. 9038
- pesticides, tadpoles, *Pseudacris*, *Bufo*. 7164
- Phytolacca dodecandra* as molluscicide. 7839
- pollutants, *Pleuronectes*, Crangon, *Homarus*, British Isles. 7466
- rhodamine B. 5228
- rubratoxin B, *Tetrahymena*, *Volvox*. 7649
- Salmo salar*, yellow phosphorus. 4555
- tensid. 5579
- tentacle extracts, *Chironex fleckeri*. 4837
- tetrachloro-O-benzoquinone. 4331
- toxics and phenols, *Salmo gairdneri*. 7452
- toxins from eggs of fish and Amphibia. 6589
- toxins, *Fundulus heteroclitus*. 5443
- vertebrates and invertebrates, DDT. 7450
- yellow phosphorus, *Clupea harengus*. 4555
- Biochemical compositions**, seasonal changes in Wallagonia. 882
- Biochemical oxygen demand**. 3751
 - activated sludge plant. 3761

- Biochemical oxygen demand, contd.**
bacteria, poultry waste. 6806
faecal coliform regrowth. 3766
sewage treatment lagoon. 6805
streams. 2432
- Biochemistry,**
Acipenser ruthenus. 2308
Algae, Mediterranean. 7535
Centroscymnus crepidator. 5209
changes during infection by *Microcystis aeruginosa*
of *Perca fluviatilis*. 4422
Chrysophyceae. 5642, 6740
Coelastrum. 5719
cytochemical data, *Aplysia* heart. 6102
eosinophil leucocytes, vertebrates. 5614
eyes from *Bufo marinus* *ictericus*. 8750
genetics, *Thunniformes*. 8189
Glossobalanus crozieri. 8727
Halocynthia aurantium. 8730
hexaene hydrocarbon in *Skeletonema costatum*. 8322
Lissomyx exilis, effects of prolonged fasting. 2041
of marine algae. 1741
of *Mesochaetopterus* and *Telepsavus*. 1873
oocytes, Amphibia. 7945
Phragmatopoma lapidosa. 1874
preoptic recess organ, vertebrates. 5615
salamander alkaloids. 3530
seasonal variations, *Patella vulgata*. 3446
sulphur compound evolution, algae. 4727
sulphydryl and disulphide group role, notochord,
Amphioxus. 7940
thylakoid membranes, *Chlamydomonas reinhardtii*.
5702
zooplankton. 5513
- Biodegradation**, undecane, *Pseudomonas*, North Sea.
8415
- Biogenesis**. 7489
melanogenesis, *Uca pugnax*. 6054
- Biological control,**
aquatic midges by *Menidia audens*, California. 7404
Culex tarsalis, California. 7829
international cooperation. 7471
larvicides, *Petromyzon marinus*, Michigan. 4291
weeds, *Ctenopharyngodon idella*. 8137
weeds, *Ctenopharyngodon idella*, India. 8233
- Biological models**, pollution by carcinogenic hydro-
carbons, lagoon environment. 5789
- Biology,**
Acanthocyclops americanus, River Moskva. 6941
comparative studies on *Setipinna godavariensis*,
from Indian estuaries. 4353
Cymatium and *Bursa*. 1983
Dicathais aegrotas, Western Australia. 4119
Diplostauron elegans. 6765
freshwater gastropods, Madagascar. 4113
Gadus morhua, Newfoundland. 4388
glycaemia level, bony fish. 4308
Hemirhamphus marginatus. 4454
Jaera albifrons in the Polish Baltic Sea. 1254
Leptophlebia cupida populations. 6084
Lucifer faxoni. 4321
Meda fulgida, Arizona. 4376
Oncorhynchus, Adak Island. 6403
Orcinus orca. 8847
Otolithoides brunneus, India. 4421
Palaemon serratus. 2691
Phoronidea, Sweden. 6187
place of living organisms in size scale. 7478
Planorbidae, southern United States. 3440
Polynemidae, Indian Ocean. 4473
Sarda orientalis, Ceylon. 5409
Sardinella marquesensis. 8928
sexual polyps, *Hydractinia echinata*. 6894
Talorchestia brito. 6051, 6993
Tellina tenuis, Charente-Maritime coast. 4167
Thigmotricha. 6864
Tinca tinca, Ireland. 8970
- Bioluminescence**. 6719
Apogonidae, Philippines. 8985
dinoflagellates, photometer for mapping. 1802
luciferin biosynthesis, *Latia*. 6113
Onychoteuthis, Japan. 8696
photometrics. 5480
Pisces, Japan. 8039
plankton. 2349
Pyrodinium bahamense, *Gonyaulax polyedra* and
Pyrocystis lunula. 1805
radiation response, *Photobacterium fischeri*-H-2.
7575
Renilla, calcium-triggered light emission. 5878
Renilla reniformis. 6895
- Biomass,**
ATP as indicator, sediment. 6637
Cyclopoida, Indian Ocean. 5952
determination, phytoplankton. 3711
distribution in rocky intertidal communities, US
Pacific coast. 978
microbial, euphotic zone, North Pacific subarctic.
8403
Mollusca, Lake Chad. 7838
phytoplankton. 475
vertical distribution, Copepoda, Pacific. 4893
- Biometrics,**
adult herring, Gulf of Maine and adjacent waters.
363
Angulata Lake form, *Lymnaea catascopium*,
Michigan. 7043
average weight, juvenile salmon. 2972
body size of *Rana t. temporaria* and *R. a. arvalis*.
305
Bufo arenarum subsp. 5078
Catostomus catostomus, Lake Superior. 401
Chlorophthalmus albatrossis. 455
Cirripedia. 1893
Cobitis larvata, Italy. 7311
cranium, *Pusa* spp. 7224
3-dimensional representation of measurement data.
505
gill dimensions of tunnies. 916
Gobio gobio, Poland. 6463
haddock length conversion factors for St. Pierre
Bank, Newfoundland. 427
Haemulon aurolineatum. 894
head width of mosquito larvae for instar determina-
tion. 2712
heritability of linear body measurements in *Rana*.
769
herring year-classes, Maine. 362
Hirundichthys affinis. 933
Ischnura elegans. 712
Laminaria digitata population. 57
length and weight of *Thunnus atlanticus*. 922
length-weight relationship in young flatfish. 941
Lollinguncula brevis. 266
Lophotes cepedianus, Cape Peloro. 5454
Mirounga leonina. 791
morphological differentiation, Cyprinion, Iraq. 7315
Mugil brasiliensis, Brazil. 6569

Biometrics, contd.

- Mugil curema, 935
- Phoca hispida subsp. 337
- Porifera, 6868
- relation between tail length and total length in Penaeus spp. 200
- relation between wet formalin weight of copepods and body length. 1891
- Sardinella, Indo-Pacific. 4347
- Sardinella sirm, Okinawa, 4350
- shell variability, Polygyra dorfeuilliana. 7870
- skull, Zalophus californianus. 8033
- Tapes decussatus, Thau. 4165
- taxonomy, Odontophrynus, 5093
- Thunnus alalunga, North and South Hemispheres. 7382
- Thunnus atlanticus, Rio Grande do Norte. 6542
- Triloculina echinata, Arabian Sea. 5854

Biomphalaria alexandrina, 7686

- cercarial production by Schistosoma mansoni. 7847

Biomphalaria glabrata, 4998

- aestivation and genetics, 3438
- arterial system, 3439
- effects of Schistosomiasis. 6105
- parasitism by Anafilaroides. 5002
- parasitism by Anafilaroides rostratus. 7695
- pearl formation, 6104

Biomphalaria pfeifferi, 7848

- transmitting Schistosoma, 721
- vector of Schistosoma mansoni, control by N-trityl-morpholine, Tanzania. 7849

Biomphalaria sudanica, metabolism. 7031

Biophysical parameters, Torpedo skin. 810

Biostratigraphy, Pleistocene Foraminifera. 3879

Biosynthesis,

- Acetabularia mediterranea, chlorophyll. 1770
- adrenalin, heart, Petromyzon marinus. 7255
- Algae. 5620
- alkanes, Nostoc muscorum. 527
- alkyl glyceryl ethers, Asterias forbesi. 5044
- δ -aminolaevulinic acid, Chlorella. 8341
- amitrol effects, Poteriochromonas stipitata. 6744
- arachidonic acid, algae. 518
- arginine, regulation of in Chlamydomonas. 559
- arginine, specific regulatory mechanism in Chlamydomonas. 560
- ascorbic acid, toad kidney. 2868
- bufadienolides, Bufo marinus. 7955
- bufadienolides, Scilla, Bufo. 3522
- carbohydrates, calcium and strontium effects, Protosiphon. 6769
- cell wall, effects of inhibitors, Anabaena variabilis. 8299
- cell wall, ultrastructure, Spirogyra. 5730
- ceramide aminoethylphosphonate. 6096, 6097
- changes in activity, Oryzias latipes. 7410
- chitin, blood sugars relation, Emerita asiatica. 6014
- chloroplast membranes, Chlamydomonas reinhardtii. 5700, 5701
- collagen, effects of prolactin, tadpole tail fin. 7195
- corticosteroids, interrenal gland, Squalus. 5217
- crassin acetate, Pseudoplexaura porosa. 8475
- DNA, enzyme regulation, Chlorella. 7511
- DNA in hybrid Echinoderms. 7909
- DNA, neurons, Tritonia diomedea. 6127
- DNA, nuclei, Tetrahymena. 7653
- DNA, silicon role, Cylindrotheca fusiformis. 4623
- DNA, X-irradiation, Carassius auratus. 6445

DNA, Xenopus laevis. 5139

- dopamine from DOPA, Mercenaria. 3466
 - glutamate dehydrogenase, amphibian liver. 4242
 - haemocyanin formation, Limulus polyphemus. 6094
 - haemoglobin, Xenopus laevis. 3526
 - hybrid proteins, algae. 4597
 - 18-hydroxycorticosterone, adrenocortical tissue, Teleostei. 7346
 - immobilization antigen, Paramecium aurelia. 8450
 - lipids, drug effects, Euglena gracilis. 7552
 - luciferin, Latia. 6113
 - macromolecules, blood cells, dogfish. 6368
 - methionine, Ochromonas malhamensis. 20
 - microplankton. 4749
 - monogalactosyl diglycerides, Euglena gracilis. 1078
 - mutagen effects, Paramecium aurelia. 4812
 - nitrate-reductase, Ankistrodemus. 3225
 - nuclear proteins during sea urchin development. 2036
 - nuclear proteins, embryos, rainbow trout. 6428
 - nucleic acids and polymerases, larval development, sea urchin. 6166
 - oxygen, thermal reactions, Chlorella pyrenoidosa. 4660
 - phosphatidylcholine, Tetrahymena pyriformis. 4822
 - phospholipids, Homarus americanus. 1913
 - phytoquinones, algae. 5711
 - pigments, Anabaena variabilis, diphenylamine. 4607
 - Porifera. 6880
 - protein synthesis, absolute rates, sea urchins. 7911
 - protein synthesis, Amphibia. 7944
 - protein synthesis, Anguilla. 3685
 - protein synthesis, embryos, sea urchins. 7910
 - protein synthesis, regenerating limb of Triturus. 4245
 - protein synthesis, regulation, zoospores, Blastocladia. 3302
 - proteins, cells and chloroplasts, Acetabularia mediterranea. 7503
 - proteins, chloroplasts, Lemna minor. 4786
 - proteins, hypophysis, duck. 8016
 - proteins, Paratelmusa hydrodromus. 4959
 - proteins, sea urchins. 5051
 - pteridines, tadpole, Rana catesbeiana. 7979
 - RNA. 5052
 - RNA, anucleate egg, Arbacia punctulata. 8707
 - RNA, effect of rate and number of cell divisions, frog. 7989
 - RNA, embryogenesis, Misgurnus fossilis. 7336
 - RNA, Paracentrotus lividus. 5048
 - RNA, sequence diversity, Xenopus. 3524
 - RNA, Spisula solidissima. 7894
 - steroids, absence, Callinectes, Balanus. 7758
 - 3 β -sterols, Viviparus and Littorina. 729
 - tetrahymanol, Tetrahymena pyriformis. 7647
 - unsaturated fatty acids, Pseudomonas. 8414
 - uric acid, embryos, Limnaea palustris. 3444
 - uric acid, Molgula manhattensis. 7143
 - wax esters, fish. 3032
- ## Bipolar distribution, Porifera. 6874
- ## Bird droppings, effect on brackish water rockpools. 1688
- ## Bithynia, 7019
- ## Bithynia caerulea, anatomy, Lake Balkhash. 7032
- ## Bitrichia longispina. 7425
- ## Bivalvia,
- acetylcholine, heart. 5027
 - algal foods, bacteriology. 2786
 - borers. 2807
 - burrowing aided by shell ornamentation. 748, 2018

Bivalvia, contd.

- catalase activity in tissue, 6129
- Cretaceous, South Dakota, 7874
- danger of poisoning, 7058
- environmental and biological control of shell mineralogy, 7062
- feeding by *Renocera*, 7017
- leaping movements, 2004
- relict fauna, Baltic Sea, 8670
- shell, internal microstructure, 2785
- tolerances and requirements of embryos and larvae, 6128

Black Sea,

- Acartia clausi* and *Centropages kröyeri*, 1883
- accumulation of Cs^{137} by hyponeuston, 614
- bryozoa, 2039
- Copepoda, 3989
- Cyanophyceae, 1747
- hydroids, 1843
- light regime, 2401
- Ototyphlonemertes antipai sp.n., 1868
- phytoplankton, 2351
- β -radioactivity of Phaeophyta, 3835
- sand areas and fauna, 2402
- sediments, 2403
- zooplankton, 2356

Bladder,

- as excretory organ for K in *Bufo marinus*, 298
- effects of valinomycin, *Pseudemys scripta*, 5149
- sodium transport, *Bufo marinus*, 5083
- sodium transport, *Pseudemys scripta*, 5147
- sodium transport stimulants, *Bufo marinus*, 5085
- sodium transport, turtle, 5150
- toad, chlorpromide effect, 2870
- toad, Na transport stimulated by 1 α -hydroxycorticosterone, 809

Blaesoxipha, 3310**blastoclastiella**, protein synthesis regulation, zoospores, 3302**blastoclastiella emersonii**,

- cytochrome oxidase activity, 4769
- decay of γ -particles in germinating zoospores, 3861
- zoospore germination, 1127, 1128

blastoderm, *Misgurnus*, differentiation capacity when isolated, 877**blenniidae**,

- ecology, Ligurian Sea, 5390
- Indian coast, 8163

blennius, 4401, 5225, 5390

- activity rhythms, Mediterranean, 4402
- isolation and characterization of lipostichaerin, 8982
- blennius semifasciatus*, distribution, Indian coast, 8164

blenharisma, competition, 623**blenharisma intermedium**,

- digestive enzymes, 95
- doublet str., 615
- phosphatases, urease, dehydrogenase, 5832

blanca, 4855**blanca**, taxonomy, 8128**blood**,

- blood-brain barrier, absence in *Carcinus maenas*, 1904
- characteristics, Pisces, Texas coast, 7270
- chemistry of, in fishes, 345
- classifications, heterogeneity, *Ensatina eschscholtzi*, Pacific, 5088
- differences between ictalurid populations defined by blood group antigens and antibodies, 874
- effect of nicotine and amines on pressure, Pisces, 7238

7238

- effect of temperature on blood group agglutinins in *Ictalurus*, 873
- effect of thyroid stimulating hormone, components, *Heteropneustes fossilis*, 7329
- Esox lucius*, 7274
- geographic variation in proteins, *Acris* spp., 6204
- group A reactive substance, *Patella vulgata*, 8664
- haematological effects of apholate in catfish, 411
- haematology of *Halocynthia aurantium*, 8728
- haematology of *Hypophthalmichthys*, *Otenopharyngodon*, 871
- haematology of *Ictalurus* spp., 4373
- haematology of *Lagodon rhomboides*, 3664
- haematology of *Mugil cephalus*, 3664
- haematology of *Mugil curema*, 936
- haematology of *Neoceratodus forsteri*, 938
- haematology of Pisces, Texas coast, 7270
- haematology of *Rana pipiens*, 3510
- haematology of *Scomberomorus maculatus*, Brazil, 4352
- immunological analysis of serum proteins of *Sebastes*, 444
- lipid composition, *Mirounga*, *Pagophilus*, 7219
- macrocytic anaemia, *Salvelinus fontinalis*, 7293
- osmoregulation, *Scutus breviculus*, 8667
- osmotic concentration, *Eriocheir sinensis*, 4041
- pigments, haemocyanin, *Scia officinalis*, 7103
- pigments, haemoglobin, lamprey, 8061
- pigments, Pisces, 5339
- physical properties, *Pagophilus groenlandicus*, 336
- physiological consequences of aortic catheterization in *Salvelinus*, 848
- piscine serological taxonomy, 898
- pressure regulation, Pisces, 7239
- protein polymorphism, *Pagophilus groenlandicus*, 335
- protein polymorphism, *Sprattus sprattus*, 6439
- proteins, metamorphic changes, *Amphibia*, 6202
- proteins, *Scia officinalis*, 7103
- response of peripheral blood cells to induced endocytosis in goldfish, 399
- serum, *Invertebrata*, 6721
- serum protein composition by agar gel electrophoresis, 445
- serum variations, *Rana pipiens*, 8775
- system, relative antiquity, *Heterodontus portjacksoni*, 6364
- vessels, calcification of aorta, *Pseudemys concinna*, 8810
- vessels, gills, *Cottus gobio*, 3026
- winter, *Caloptocephala gayi*, 7958

Blood cells,

- ATPase characterization, *Squalus acanthias*, 5218
- blood counts, *Cirrhina*, *Catla*, *Labeo*, 6471
- Chiloseyllum greshium*, 351
- cyanoblast, *Limulus polyphemus*, 6094
- Cyprinus carpio*, 8138
- developing erythroid cells of goldfish, 400
- differential blood counts, *Labeo*, *Cirrhina*, *Catla*, 6471
- eosinophil leucocytes, vertebrates, 5614
- erythrocytes, cyclic nucleotide phosphodiesterase, frog, 8790
- erythrocytes, *Eptatretus stoutii*, 8060
- erythrocytes, fluctuations, Pisces, 8082
- erythrocytes, lamellar membrane around viruses, *Rana pipiens*, 7986
- erythrocytes, phosphodiesterase, frog, 7987

Blood cells, contd.

- erythrocytes, *Rana catesbeiana*, 6261
- erythropoiesis, *Sphenodon*, *Malaclemys*, 6295
- GABA content, *Pleuronectes*, 6580
- G6PD, vertebrates, 5610
- Halocynthia aurantium*, 8728
- haemocyte values, *Callinectes sapidus*, 6964
- haemoglobin, *Amphibia*, 8783
- haemoglobin synthesis, *Xenopus laevis*, 3526
- histochemistry, *Halocynthia aurantium*, 8729
- histochemistry, leucocytes, *Amphibia*, *Pisces*, 7319
- Ictiobus* spp., 4373
- leucocyte numbers of *Seriola*, *Salmo*, *Anguilla* and *Plecoglossus*, 818
- leucocytes, *Amphibia*, *Pisces*, 7319
- leucocytes, *Pisces*, 8081
- proteins, *Scomber scombrus*, 6519
- Rana pipiens*, 3510
- 'Root effect', *Anguilla vulgaris*, 6548
- white blood cell counts, *Taricha granulosa*, 6269
- winter haemogram, *Calptocephalella gayi*, 7958

Blood liquids,

- anaphylatoxin-forming system in plasma, eel, 8194
- Astacus*, coagulation, 4913
- blue-green pigment, *Myoxocephalus*, 3666
- catecholamine levels, stress influence, *Scyliorhinus canicula*, 7261
- effect of cerebellectomy on catecholamines, *Scyliorhinus canicula*, 7263
- electrophoretic analysis, *Salmo salar*, 5302
- haemolymph proteins, *Portunidae*, 3386
- leptospiral agglutinating agent, *Clemmys caspica*, 8809
- oxygen fixation, *Arenicola marina*, 3343
- pathways in teleost gills, 4307
- pH, *Ictalurus punctatus*, 6469
- plasma, *Gadus*, effected by oestradiol 3-benzoate, 883
- protein chromatographic analysis, 8945
- Rana pipiens*, 3510
- serum albumin, *Ensatina eschscholtzi*, Pacific coast, 5088
- serum analysis, *Clupea harengus*, 3605
- serum analysis, *Macropipus puber*, 7782
- serum corticosteroids, *Rana pipiens*, 7985
- serum factors toxic to *Acanthobothrium quadripartium*, *Raja radiata*, 8487
- serum lipids, *Oncorhynchus gorbuscha*, 3615
- serum organic constituents, *Fundulus heteroclitus*, 5445
- serum protein, effects of temperature, *Fundulus heteroclitus*, 8205
- serum proteins and antigens, *Acipenser* spp., 8191
- serum proteins, *Cyprinus*, 8123
- supercooled *Fundulus heteroclitus*, 5444

Blythiomyces aureus* sp.n.**, 6816Blythiomyces laevis***, 6816**Bodo**, 7620**Body cavity**, *Thetys vagina*, habituation by *Ocythoe*, 3490**Body fluid**, *Lycastis indica*, 3960**Body size**,

- Delphinapterus leucas*, 2902
- relation with filtering rate and temperature, *Daphnia*, 1880

Body wall,

- Bryozoa*, 2835
- tunic, chemical composition, *Halocynthia aurantium*, 8730

tunic morphology, *Halocynthia aurantium*, 8728

Body weight,

- effects on N₂ excretion in *Lepomis macrochirus*, 899
- Marisa cornuarietis*, relation to O₂ consumption, 1990

Boeckella triarticulata, in athalassic saline waters, 2632**Bog**, peat-bogs, effect of redox potential and pH on flora, 2562**Bog environment**, vegetation, Sweden, 5809***Bogidiella somala* sp.n.**, cave fauna, Somalia, 5997***Bohadschia koellikeri***,

- isolation of 3 new holothurinogenins, 752
- Praslinogenin*, 7111

Bohadschia marmorata, 5966**Bohr effect**, negative, *Triton cristatus*, 2064***Bola cuja***, new genus suggested, 429***Bolboschoenus***, 4775***Boldia angustata* sp.n.**, Alabama, 4707***Boleophthalmus***, eye muscles, 8899***Bolinopsis***, culture apparatus, 5877***Bolinopsis infundibulum***, 5877***Boltenia ovifera***,

- polymorphism, 2844
- structure of tunic, 285

Bombina, ion-exchange investigation, 4241***Bombina bombina***, 6227

- bioacoustics, 293

Bombina variegata, 6202, 6227***Bombina v. variegata***, bioacoustics, 293***Bombinator igneus***, 5615, 7150***Bomolochidae***, Caribbean, 6943***Bomolochus jonesi* sp.n.**, distribution, 3990**Bonin Islands**, Chichijima, watermoulds, 1819***Bonnemaisionia hamifera***,

- ecology, culture, Nova Scotia, 3265
- vegetative development of gametophyte, 4708

Boodlea, 8326***Boodlea siamensis f. robusta***, cytology, 8329**Books**,

- 'Conchologia Iconica' (1843-1878), 6100
- Perry's 'Conchology' (1811), 6099

Boreomysis arctica, sensory papilla X-organ, 180***Boreomysiphon robustum***, 7837**Boring mechanisms**, *Petricola pholadiformis*, 7891**Boring organisms**,

- algal, 2492
- Balanus tintinnabulum californicus*, 6954
- barnacles, 2635
- Bivalvia*, mechanical borers, 2807
- boring structures of sipunculids, 2614
- Caobangia*, 2606
- Cliona*, CaCO₃ penetration, 2577
- Cliona viridis*, *Zooxanthellae* taxonomy, 3322
- Cuxhaven, 6152
- Eugymnanthea*, India, 5868
- in calcareous terrigenous rocks, Pacific Coast, 2793
- in *Placopecten magellanicus* shell, 2803
- Limnoria lignorum*, 4054
- Mercenaria mercenaria* infested by *Polydora*, 2795
- Mollusca*, Red Sea, 2799
- Monterey Harbour, California, 2833
- parasitic barnacles, *Eschrichtius robustus*, California, 8845
- Penitella conradi* of *Haliotis*, 2802
- polychaetes, 2605
- Polydora websteri* boring *Crassostrea virginica*, 2615
- prismatic region in *Mytilus edulis* and *Crassostrea*

Boring organisms, contd.

virginica, 2798

Psiloteredo megotara, 4054

Purpura (Thais) *lapillus*, 2770

role of marine fungi, 2553

Siphonaria pectinata, 2774

Teredo navalis, 4054

Teredo navalis, inner Danish waters, 4166

Urosalpinx cinerea, 2778

Urosalpinx cinerea follyensis, carbonic anhydrase, 2780

Boring organs,

accessory, *Polinices lewisi*, 236

Urosalpinx cinerea, 2779

Bornia corbuloides, 4540

Boschamaella balani, larva, 172

Bosmina, 5306, 6606

Bosmina coregoni, 8101

Bosmina longirostris, 4492, 6938, 8540

Bosmina meridionalis, 4507

Bothidae, 5461

Bothriocephalus gowkongensis, 4370

Bothriocephalus scorpii, 5382

Botryllus schlosseri,

chromosomes, 2043

electron microscope studies, heart, 4206

Bottom topography,

coralligenous beds, Mediterranean Sea, 6631

Vema Seamount, 6636

Boutisaccus pisceus, 4851

Boulengeromyrus, osteology, 4444, 5439

Boulengeromyrus knoeffleri, 5439

Bowmaniella gen.n., (Gastrosaccinae), tropical

— America, 1911

Bowmaniella bacescui sp.n., 6963

Bowmaniella dissimilis sp.n., 6963

Bowmaniella parageia sp.n., 6963

Bowmaniella sewelli sp.n., 6963

Box salpa, parasitism by *Microcotyle salpae*, Tunisia, 4416

Braarudosphaera, 7423

Brachaluteres wolfei sp.n., Tasmania, 925, 4293

Brachinecta acanthopenes sp.n., India, 3352

Brachiomonas submarina,

ultrastructure, 30

vacuolar system ultrastructure, 5695

Brachionus calyciflorus, 6915

cultivation, 5924

factors determining temporal variation, 5926

influence of temperature on population dynamics, 5925

Brachionus quadridentatus, x *Brachionus urceolaris*, 649

Brachionus urceolaris, 7688

crossed with *Brachionus quadridentatus*, 649

Brachiopoda, 8241

Articulata, Ordovician, Wyoming, 7130

distribution, fossil, Tennessee, 6190

Guatemala, 6192

mesodermal endoskeleton, 4190

Nevada, 6191

Silurian, Yukon, 7131

taxonomy, 7129

ultrastructure of growth margins, 281

Brachycoelium salamandrae, in *Euproctus montanus*, 764

Brachydanio rerio, 7394

alarm reaction, 5319

development of lateral musculature, 864

growth inhibitors, 8129

mechanism of action, methamphetamine, 5231

temperature effects on eggs, 6442

ultrastructure during oogenesis, 6443

Brachyphallus crenatus, from *Gasterosteus aculeatus*, 1181

Brachyrhyncha, deoxyribonucleates, 674

Brachyura, distribution, Pembrokeshire, 4034

Brackish water environment,

Aqualinderella fermentans gen. et sp.n., 4768

Baltic Sea, 9070, 9072

benthos as pollution indicators, 9069

Bryozoa, Germany, 8724

Chanos larvae, 5232

concentrations of dissolved chemicals, Chikugogawa River, 6626

copepod substrate specificities, 4891

Copepoda, taxonomy, India, 7724

diagnosis of species, 9068

ecology, 3741

ecology, barrier beach island pond, Carolina, 8238

ecology, Gobiidae, 8171

ecology, Gobius, Corsica, 3657

ecology, *Hirschmannia viridis*, 2706

effects of pulp mill effluent, Scotland, 9099

fungi, Yugoslavia, 7580

hydrobiology of maritime basin, Ostend, 491

influence on growth, Chlorococcales, 3236

laboratory model, 8237

Lago di Faro, 4831

Lake Nordlaguna, 5534

Lymnea bouilleti, Bavaria, 7042

Mugil cephalus, aquaculture, 3695

osmoregulation, crocodiles, 3533

phytoplankton from maritime basin, Ostend, 493

Pisces, Lake Chilka, 6371

pools, effects of bird droppings, 1688

population estimates, Cocody Bay, 3582

primary production, Lake Mariut, 5515, 5516

Primorye, Japan, 6625

Protista from Belgian coast, 492

Protozoa from the Hiddensee, 8441

substrate specificity, Harpacticoida, 8543

symposium, 3120

use of antibiotics for obtaining axenic multicellular algae, 4602

variations of factors due to pollution, 5535

wood-destruction by Bryozoa, 5059

Bradinopygna geminata, larvae, 4988

Bragasellus gen.n., 8568

Brain,

adenohypophysis, *Anoptichthys jordani*, 3701

adenohypophysis ultrastructure, *Delphinus delphis*, 4258

afferents, Reptilia, Amphibia, 7174

archaic fish, 5165

Carcinus maenas, absence of blood-brain barrier, 1904

cerebellum, frog, 7964

cerebellum, vestibular organ, frog, 8796

composition, phospholipid, myelin, frog, 7965

cranium study related to phylogeny, Cyprinidae, 8933

deutocerebral organ, Crustacea, 7749

effects of cerebellectomy, plasma level of catecholamines, *Scyliorhinus canicula*, 7263

effects of glucose and hormones, *Rana ridibunda*, 7990

effects of steroids, frog, 7191

Brain, contd.

- enzymes, *Salmo gairdneri*, 3618
- epileptic focus, forebrain, *Testudo graeca*, 8812
- epiphysis cerebri, *Leptonichotes weddelli*, 6308
- extra-hypothalamic neurones, *Tilapia mossambica*, 7372
- fluorescence histochemistry, vertebrates, 7150
- forebrain, *Ascapus truci*, 7950
- functional organization, vestibular afferents, frog, 7968
- glucose and amino acid metabolism, *Octopus*, 7098
- histochemistry, monoamines in hypothalamus, *Entosphenus*, *Leucopsarion*, 6355
- hypophysectomy effects on metabolism, *Umbra limi*, 7298
- integrative properties of reflex motoneuron in *Carcinus*, 685
- isolation of synaptic vesicles, octopus, 8693
- melatonin in pineal organ, *Oncorhynchus tshawytscha*, 8885
- motor functions, *Caiman sclerops*, 8805
- organ-specific population, RNA, *Oncorhynchus nerka*, 6410
- organ specificity of nucleic acids, *Oncorhynchus nerka*, 8920
- pars distalis ultrastructure, *Taricha torosa*, 6270
- pars intermedia, secretion, *Xenopus laevis*, 6286, 6287
- pineal organ, morphology, *Clarias lazera*, 7310
- pituitary-adrenocortical feedback mechanism, *Anguilla rostrata*, 6547
- pituitary organ, effects of environmental salinity, *Mugil*, 9036
- preoptical neurohypophysis, systematic histogenesis, *Cypriniformes*, 8931
- Purkinje cell inhibition, *Salmo gairdneri*, 5296
- regulation of neuron composition of cerebellum cortex, 8709
- relative growth, nucleic acid content, cell numbers, *Octopus vulgaris*, 7101
- stimulation of tectum, *Gadus morhua*, 5378
- telencephalon, *Chrysemys picta belli*, 8014
- telencephalon regeneration, *Rana esculenta*, 5104
- telencephalon, resemblances between Amphibia and *Crossopterygii*, 5068
- telencephalon role in conditioned avoidance responses, *Carassius auratus*, 8941
- telencephalon role in food-reinforced behaviour, *Carassius auratus*, 8948
- trigeminal mesencephalic nucleus, *Caiman sclerops*, 8007
- ultrastructure of vertical lobe, *Octopus*, 8692
- Brama**, 5221
- Brama brama**, 5164
- Brama raii**, 5163
- Branchellion**, 3972
- Branchinecta campestris**, osmotic adaptation to saline astatic waters, 1209
- Branchinecta lindahli**, spoor, 7717
- Branchiobdella italica**, new record, Poland, 1196
- Branchioma**, gut and nerve-cord interaction in regeneration, 657
- Branchiophryxus koehleri**, distribution, India, 4925
- Branchiopoda**, ontogeny and morphology, *Artemia salina*, 3980
- Branchiostoma**,
 - physiology, fast paramyosin muscle, 3500
 - ultrastructure, pharynx, hepatic caecum, 3501
- Branchiostoma floridae**, chitin in gill bars, 6198

Branchiostoma lanceolatum,

- activity of endostyle, 4205
- branchial skeleton, chemical components, 4201
- distribution, 6199
- distribution, Pulicat Lake, 4202
- pharyngeal region, structure, 4204
- spinal cord, 4200

Branchipus alpinus, distribution, Piedmont, 4884

Brantothuria arenicola, 7728

Branta canadensis, nesting behaviour, 6301

Brazil,

- Alagoas and Sergipe, geology, 2465
- Anadyomene saldantia* sp.n., 548
- bacterial counts in water of Manaus, 983
- Barra des Jangadas, diatom, 1765
- Barra des Jangadas, effect of pollution, 2435
- Characeae, 3816
- coast, rare molluscs, 2753
- Desmidiaceae, 3817
- Dolichosudis fuliginosa* sp.n., 926
- Enoplometopus antillensis* distribution, 3392
- feeding of *Thunnus atlanticus* off NE coast, 920
- fishery biology of *Hirundichthys affinis*, 932
- fishery biology of *Thunnus atlanticus*, 918
- Forficatocaris noodti* gen.n. sp.n., 1217
- Lake Olha d'Agua, ecology, 2385
- length and weight of *Thunnus atlanticus*, 922
- Octocanna haeckeli* sp.n., 3931
- Pernambuco, decapod Crustacea of swamps, 1906
- Pernambuco, Tamandare Bay, sediments, 2464
- Polychaeta, 3967
- Rio de Janeiro, sediments, 2405
- Rio de Janeiro, Sepetiba Bay, Foraminifera, 1832
- Rio Grande do Norte, spiny lobster fishery, 692
- Rio Negro, O₂ studies, 2950
- Rocas Atoll, Foraminifera, 1831
- shelf off Alagoas and Sergipe, 2406
- shrimp fisheries, 2677
- Sternapis capillata* sp.n., 3976
- Stromia* gen.n. (Flagellata), 2574
- Vermetidae and calcareous algae, 2404

Breeding colonies, *Stictocaro punctatus*, New Zealand, 8828

Breeding grounds,

- Culicidae, 7827
- Larus dominicanus*, Rangitoto, 8823
- orientation, *Bufo boreas*, 3505

Breeding of animals by man, see **Aquaculture**.

Bregmaceros, 5222

Bregmacerotidae, 4306

Brevoortia, 7270

- fats, 2962

Briarosaccus, parasite of *Lithodes*, Bering Sea, 6956

Briarosaccus tenellus sp.n., British Columbia, 6956

Bristaster latifrons, 7440

Brissus, 7108

Brissus gigas, distribution, New Zealand, 4189

British Columbia,

- Babine River, age and size of *Salmo gairdneri*, 2984
- Marion Lake, *Cyclops bicuspidatus* preying on zooplankton, 480
- productivity of Owikeno Lake, 483

British Isles,

- Eurystomina terricola*, 2598
- fouling organisms, 2636
- Lake District, Actinomycetes, 2552
- Lake District, fauna of stony substratum, 3086
- Lake District, vitamin B₁₂ concentrations, 1089
- Lincolnshire, Plectoptera and Ephemeroptera, 2724

British Isles, contd.

- Norfolk, Orthopsyllus, 3363
Northumberland, west coast Nematoda, 2597
Pembroke and Cornwall, oil pollution, 1004
Plymouth, Tamar Estuary, ecology, 3743
River Thames, phytoplankton, 3059
Scotland coast, Litocorsa stremma gen. et sp.n. (Polychaeta), 3959
Scotland, Pilargidae, 3959
Scottish rivers, trout and grayling, 2409
Somerset, aquaphyte ecology, 3868
Somersetshire, algae of 2 pools, 3191
- Bromine,**
requirement for algae grown in bacteria-free cultures, 1069
treatment of water, prevention of microorganisms, 6713
use of poly-bromide resin in microorganism control, 5570
- Brosme brosmie,** 4387
- Bryophyta,**
ecology, 7600
testacean communities, 108
- Bryopsis,** protonema with giant nucleus, 6752
- Bryopsis plumosa,** 8328
- Bryozoa,** 5529, 6631, 8241, 9058
algal associations, California, 4192
analysis of organogenic sediments, Algerian Coast, 4136
apparatus for culture, 6186
Black Sea, 2039
body wall, 2835
Brazil, central Africa, 5056
burrowing, 2834
destruction of wood, brackish waters, 5059
distribution of new species, Hawaii, 4195
Ectoprocta, Indian waters, 4191
Isle of Man, 5057
structure of compensation sac, 7931
versus the term Ectoprocta, 280
- Bubaris ammosclera** sp.n., Barbados, 4825
- Buccinaceae,** type species, Senckenberg Museum, 7033
- Buccinum persicum,** designated type-sp of Purpura, 728
- Buccinum pustulosum,** objection to suppression, 229
- Buccinum undatum,** 4023
characterization of operculum proteins, 7850
egg capsule proteins, 7852
osmoregulation, 7851
radular muscle myoglobin, 719
- Bucephalus varicus,** parasite, Pinctada fucata, 3476
- Bufo,** 7152, 7623, 8734
distribution, 6254
mating calls and hybridization showing speciation, 5077
spawn eating by tadpoles, 6265
- Bufo americanus,**
hybrid, Rana pipiens, 6215
interspecies interactions, Bufo woodhousei, 6216
tadpoles, density effects, 2849
- Bufo andersoni,** Afghanistan, 5067
- Bufo arenarum,**
blood pressure active factors, 8747
diffusible factor released at fertilization, 8746
natural hybrids with Bufo spinulosus, 6218
races and cryptic subspecies, 6217
- Bufo arenarum** subsp., biometrics, 5078
- Bufo asper,** feeding behaviour, 7151
- Bufo bocourti,** auditory receptors, 4216

- Bufo boreas,** 7946, 7970
orientation to breeding sites, 3505
rate of rehydration, 7951
- Bufo bufo,** 5615, 6202, 7150, 7198
inhibitory effect of prey-dummies on prey-catching, 294
larvae, arginase activity of liver, 8748
organotypic culture of larval gonads, 5079
role of pre-optic-neurohypophyseal system in water balance, 6214
transplantation experiments, 4219
visual inhibition and excitation in prey-catching behaviour, 6212
vitellogenesis, 3504
- Bufo calamita,**
female, release call, 2850
new stations in Stubice District, Poland, 297
new stations on Baltic Sea, 295
life-cycle, 296
population dynamics, 2050
population studies, 7156
- Bufo marinus,** 7946
biosynthesis of bufadienolides, 7955
bladder as excretory organ for potassium, 298
cellular and humoral aspects of primary immune response, 6213
effects of histamine on spinal cord, 2051
fate of exogenous marinobufagin, 7956
inhibition of sodium transport across bladder, 2052
ocular fluid osmotic content, 8751
resistance to tetrodotoxin by sympathetic nerves, 7154
role of edge damage in sodium permeability of bladder, 7954
skin transport characteristics, 5084
sodium transport, bladder, 5083
sodium transport stimulants, bladder, 5085
survival aptitude, South Florida, 5081
- Bufo marinus ictericus,** biochemistry of eyes, 8750
- Bufo melanostictus,**
compensatory hypertrophy, after castration, 8752
esterase histochemistry, kidney, 6263
glucuronidase, alimentary canal, 5123
gonadotrophins, effect on kidney, 2871
morphogenesis of digestive system, 6219
- Bufo paracnemis,** biosynthesis of bufadienolides, 3522
- Bufo powerii,** 7946
- Bufo punctatus,** rate of rehydration, 7951
- Bufo regularis,**
digestive enzymes, 7153
free amino acids in nervous tissues, 7155
hind limb histogenesis and limb regeneration, 2053
- Bufo spinulosus,**
ATPase activity, gastric mucosa, 7957
natural hybrids with Bufo arenarum, 6218
- Bufo stomaticus,** histochemistry of corpora atretica, 6222
- Bufo viridis,** 7157, 8743
activity cycle, Lake Issyk-kul', 8753
Afghanistan, 5067
Baltic coast, 8743
population studies, 7156
visually-triggered flight behaviour, 2054
- Bufo woodhousei,** interspecies interactions, Bufo americanus, 6216
- Bufo woodhousei fowleri,** toxicity of pesticides to tadpoles, 7164
- Bufonidae,**
ecology, Africa, 5066

Bufonidae, contd.

Neotropical, 5069

Bugula, 3314, 7089

taxonomy, 5058

Bulbochaete hiloensis,

development and structure of zoospore vesicle, 6753

pyrenoid structure and development, 3821

ultrastructure of plasmodesmata, 31

Bulgaria,

Acanthocyclops (*Diacyclops*) *fontinalis* sp.n. from

underground waters, 1215

harpacticoid copepods, 155

new *Latonopsis* species, 1210

Porolohmannella *cvetkovi*, and *P. curvimandibulata*

spp.n., 1967

Bulimina, 8447

Buliminella sp.n., 4807

Bulimulus, 7060

Bulinus, 5916

attractant of *Schistosoma haematobium*, 5917

Bulinus nasutus, aestivation, 8652

Bulinus sericinus, chromosome constitution, Ethiopia, 8653

Bulinus tropicus, effect of temperature on distribution and control, 723

Bulinus truncatus rolfsi, transmission of bilharzia in Volta Lake, Ghana, 230

Bullfrog,

calcium and action potentials of sympathetic ganglion cells, 2082

changes in retina during development, 4223

effect of strychnine of afferent discharges, 2087

ion transport in stomach of metamorphosing tadpole, 2085

Bullia melanoides, brood protection, 7034

Bumilleria, 8284

Bumilleria sicula, comparative morphology of zoospores, 23

Bumilleriopsis filiformis,

ferredoxin-catalysed reactions, 8311

photophosphorylation with chloroplasts, 17

Buoyancy,

Clupea pallasii, *C. harengus*, 828

Heliocranchia, *Verrilliteuthis*, *Galliteuthis*, 6156

regulation, *Squalus acanthias*, 4300

seasonal changes in *Salmo salar*, 851

Buoyancy organs,

densities of marine lipids in relation to role as hydrostatic agents, 8438

Mollusca, 8680

Buoys, launching, towing and recovering, 6351

Burrowing,

behaviour of *Phyllactis*, 8474

mechanism, *Petricola pholadiformis*, 7891

of bivalves, aided by shell ornamentation, 748, 2018

Bursa, anatomy and biology, 1983

Bursaria truncatella, 6831

Bursatella leachii pleii, new northern record, 2744

Buskia, 8724

Busycon canaliculatum,

effects of transmitters on isolated radula, 5003

electromechanical coupling of radula protractor muscles, 7853

tagging, 4115

ventricular muscle, 2783

Byblis arcticus sp.n., Greenland, 7745

Byssanodonta parasitica, 4512

Bythinella, 7023, 7845

Bythiospeum, 7845

C

Cabestana, 7844

Cabomba, 5813

Cachonina niei, from the North Sea, 1080

Caecum, glycoproteins, *Sphaeroma serratum*, 212

Caenorhabditis briggsae, 3948

Caesium, 3450

Caiman crocodilus, frequency sensitivity of auditory neurons, 5142

Caiman sclerops,

function of trigeminal mesencephalic nucleus, 8007

motor functions and anatomical basis in brain, 8805

tooth replacement patterns, 6294

Cakile maritima, germination and growth, 5808

Calamactis praelongus, rapid contractions and associated potentials, 1165

Calamoecia, 3995

Calamoecia clitella, in athalassic saline waters, 2632

Calamoecia salina, in athalassic saline waters, 2632

Calamoecia tasmanica, 4507

Calamoichthys calabaricus, visual cells, 4474

Calanoida, 3735

distribution, Pacific Ocean, 4888

in athalassic saline waters, 2632

new bottom-living species, Massachusetts, 5953

new species, Massachusetts, 6940

population dynamics in exploited cultures, 5961

Calanoides philippinensis sp.n., 3991

Calanopia seymouri, Andaman Sea, 152

Calanus,

distribution, benthos, Sea of Japan, 6945

feeding efficiency in terms of N and P, 960

geographic variability, Sea of Japan, 6944

Calanus cristatus, 4893

Calanus finmarchicus,

distribution, North Atlantic, 7429

geographical and seasonal distribution, 7429

Calanus helgolandicus, 7429

aquaculture, 5962

feeding behaviour on detritus, 5963

feeding on *Ditylum brightwellii*, 1884

ultrastructure, midgut diverticulum, 5964

wax esters, 3992

Calanus lighti, distribution, morphometry, biology, Pacific, 3356

Calanus plumchrus, 4893

Calanus tenuicornis, distribution, morphometry, biology, Pacific, 3356

Calappa, 5549

Calcarea, 6870, 6884, 7654, 7655

egg polarity, larval symmetry, 6882

phylogeny, 7655

spicules, 7658

Calcareous inclusions, in *Spirostomum*, 624

Calcification,

cilia tegument, Coleps, 96

Halimeda, 1779

Calcinea, 6884

Calcinus, associated with *Sunaristes*, 164

Calciosolenia, 3812

Calcispongiae, 3903

Calcium,

distribution, Sea of Okhotsk, 4305

Calcium, contd.

- effect of hypercalcaemia on acrosomes, *Asterias amurensis*, 7108
- effect on carbohydrate synthesis, *Protosiphon*, 6769
- effect on excitatory neuromuscular transmission, *Procambarus mexicanus*, 8602
- effect, undischarged nematocysts, *Aiptasia pallida*, 8466
- efflux from frog muscle, 6243
- histochemical localization in skeletal muscle, frog, 7992
- induction of light emission in *Renilla*, 5878
- intracellular site of activation, frog muscles, 6242
- ion loss, *Anguilla anguilla*, 3686
- ions as current carriers, neurones, *Planorbis*, *Limnea*, 7051
- NACA competition at frog myoneural junction, 2076
- of bullfrog sympathetic ganglion cells, 2082
- regulation, *Anguilla anguilla*, 2340
- resistance, *Desmudiales*, 4618
- role of pituitary ACTH in regulation of use, *Heteropneustes fossilis*, 7328
- seasonal variations, *Cirrhina mrigala* juvenile, 4361
- Sr/Ca ratio of mollusc shells, 1969
- tissues, *Telescopium telescopium*, 6125
- uptake, aquatic plants, Ontario, 7599
- uptake, calcification control, algae, 8283
- watercress, 4796
- Calcium carbonate**,
penetration by *Cliona*, 2577
- precipitated by marine bacteria, 1812
- Calcium chloride**, adaptation of *Paramecium aurelia* populations to $CaCl_2$, 621
- Calcium ion concentration**, correlation with formation of gypsum crystals in *Pleurotaenium trabecula*, 1037
- Caledoniella**, 7746
- Calicotyle kroyer**, oncomiracidia, 8497
- Calidris maritima**, feeding on *Collembola*, 2710
- California**,
benthic macrofauna of the mainland shelf, 496
- check list of amphibians and reptiles, Pinnacles National Monument and Bear Valley, San Benito and Monterey Counties, 286
- freshwater jellyfish, 119
- seasonal gonadal changes in oysters of Tomales Bay, 246
- Caligus hobsoni sp.n.**, California, 5965
- Caligus krishnai sp.n.**, 3993
- Caligus mortis sp.n.**, distribution, Africa, 3357
- Caloptocephalella gayi**, winter periphery haemogram, 7958
- Calliactis**, detachment, mechanical stimulus, 4836
- Calliactis parasitica**, 4922, 5863
coordination of pedal-disc detachment, 1164
slow conduction systems, 1163
- Calliactis polypus**, commensal association with *Dardanus gemmatus*, Hawaii, 5862
- Calliactis tricolor**, association with *Dardanus venosus*, 117
- Callianassa californiensis**, 4916
- Callianassa japonica**, 4916
- Callianassa petalura**, 4916
- Callianassa tyrrhena**, 4540
- Calliarthron**, growth rates, California, 3266
- Calliblepharis jolyi sp.n.**, Brazil, 5738
- Callicorixa producta**, 7824
- dispersal, Finland, 1947

Callinectes. 4911, 7690

- Callinectes sapidus**, 5945, 8553
absence of sterol biosynthesis, 7758
Florida, 6000
host to *Paramoeba perniciosus* sp.n., 1143
occurrence of *Vibrio parahaemolyticus*, 1235
parasitized and unparasitized, haemocytocyte values, 6964
progesterone conversion, 6001
thermal tolerance, 1903
volume control of muscle fibres, 1902
- Calliobothrium verticillatum**, 8483
- Callionymus**, 4304
- Callionymus nasutus**, distribution, Australia, 8984
- Calliostoma alterna sp.n.**, Southeast Asia, 7035
- Calliostoma zizyphinum**, 6118
- Callista**, 7877
- Callithamnion**, 4705
- Callithamnion byssoides**, life history, 3267
- Callithamnion roseum**, 5733
- Callitriche**, 8137
- Callochiton spp.**, taxonomy, 4174
- Callopora**, 8724
- Callorhinus ursinus**,
1967 investigations, Pribilof Islands, 6303
meat composition, 8027
- Callorynchus millii**, 8051
- Callotetrarhynchus**, parasitic on cultured yellowtail, 1170, 1171
- Caloneis**, 6742
- Caloric equivalent**, zooplankton, 1668
- Calorific value**, benthic marine algae and relation to invertebrate food preference, 1014
- Calothrix parietina**, 3801
- Calothrix pilosa**, 8291
- Calothrix scopulorum**, 8291
- Calypsarion carinatum**, 5966
- Calypsarion leprum sp.n.**, 5966
- Calypsarion sentosum sp.n.**, 5966
- Calypsocephalella gayi**, sodium and chloride uptake, 2072
- Calypptogena**, shell structure, 6132
- Camacollaimus barbatus sp.n.**, 5921
- Camallanus lacustris**, development, 131
- Cameroon**, *Corvospongilla*, 1842
- Campanularia flexuosa**,
differential radioprotection by glutathione of growth functions, 5864
genetic variations in stolon growth, 7667
inhibition of hydroid aging, 632
- Camptocerus**, 6938
- Camptozoa**, spirally-arranged subunits in A-filaments, 282
- Campylaspis stephenseni sp.n.**, Greenland, 7740
- Canada**,
Alberta, Barrow Lake, *Coregonus artedii* and *C. zenithicus*, 829
- Beaufort Sea to Cambridge Bay, Decapoda, 689
- British Columbia, *Chondracanthus narium* sp.n., 3996
- British Columbia coast, *Dinoflagellata*, 3842
- British Columbia, *Diaptomus*, 4000
- British Columbia, fauna of saline lakes, 3742
- British Columbia, *Macoma* spp., 2794
- British Columbia, marine mammals, 3549
- British Columbia, Marion Lake, energy transfer, 3073
- British Columbia, Marion Lake, *Megalodiscus* in

Canada, contd.

- Amphibia, 2590
- British Columbia, Marion Lake, population studies on
 - Taricha and Ambystoma, 3523
- British Columbia, Ophiuroidea, 756
- British Columbia, salt lakes, 3742
- British Columbia, seal study of *Phoca vitulina richardi*, 3548
- British Columbia, seasonal changes in limnology, 966
- Diaptomus, 3998
- distribution of oyster drills, 239
- fish of the Missouri drainage, 339
- Georgian Bay, planktonic copepods, 2633
- Gulf of St. Lawrence, otoliths of *Clupea harengus*, 825
- haddock, central Scotian Shelf, 426
- James Bay, wintering of *Dolphinapterus leucas*, 790
- Lake Ontario, crustacean plankton, 959
- lake, seasonal distribution and vertical migration of planktonic rotifers, 3715
- Mackenzie and Coppermine rivers, age and growth of *Coregonus nasus*, 830
- Newfoundland, digenetic trematodes from *Gasterosteus*, 1181
- Newfoundland, 2 digenetic trematodes from *Gasterosteus*, 1183
- Newfoundland, Gyrodactylus, 5 new spp. 1182
- Nova Scotia, ecology of *Bonnemaisonia hamifera*, 3265
- Nova Scotia, Halifax County, sublittoral fauna, 3124
- Ontario, Laurel Creek Reservoir, colonization by macroinvertebrates, 970
- Ontario, *Rana catesbeiana*, home range and movement, 3511
- Quebec, Lac Carre, *Sarracenia purpurea*, 3310
- Quebec, Matamek Lake, *Salvelinus alpinus*, 3620
- records of *Occa verrucosa*, 464
- Saskatchewan, algal blooms on lakes, 2489
- tagging white whales in the Arctic, 789
- Toronto Harbour, feeding of tubificid worms, 2620
- zooplankton of Ogac Lake, Baffin Island, 480
- Canalicia rolfrandti sp.n.**, 7019
- Canary Islands**, Cephalopoda, 750
- Cancellaria**, collection, Geneva, 4126
- Cancer and carcinogens**,
 - ascorbic acid synthesis effects, *Triturus cristatus*, 8784
- Crassostrea*, 4145
- Crassostrea commercialis*, Australia, 4147
- Crassostrea virginica*, 4146
- Crassostrea virginica*, Gulf of Mexico, 4148
- epidermal lesions, *Perca flavescens*, 4432
- epidermal lesions, *Stizostedion vitreum*, 4432
- fibrolipoma, *Sebastes diploproa*, 4430
- fibroma, abdominal cavity, *Oncorhynchus*, 3614
- Ictalurus nebulosus*, 4372
- in invertebrates, 3875
- Mercenaria mercenaria*, 4151
- Mollusca, 4110, 8645
- neoplasms, phylogeny, 6327
- Ophicomina nigra*, 4185
- papillomas, *Anguilla vulgaris*, 4441
- papillomas, *Parophrys vetulus*, 4466
- Poeciliidae, amino acid effects, 3050
- Poeciliidae, tumour inducing gene constellations, 3052
- Salvelinus fontinalis*, possible thymic origin, 4346
- teleost, 4329
- tumours, *Coelenterata*, 4570
- tumours, Pisces, 4570
- tumours, Protozoa, 4570
- ulcerative dermal necrosis, *Salmo salar*, 7290
- Cancer spp.**, laboratory-reared larvae, 3385
- Cancer antennarius**, cuticle structure, 6005
- Cancer irroratus**, lab culture of larvae, 6002
- Cancer magister**,
 - degradation of adenine nucleotides in muscle during storage and cooking, 680
 - drained weight determination, 6057, 6058
 - effects of insecticides on larvae, 4033
 - prezoa, 6003
- Cancer pagurus**, 6122, 8570
 - base composition, DNA, 6004
 - fishing industry, Irish coast, 8570
- Cancer productus**, cuticle structure, 6005
- Cancerilla tubulata**, parasite, Africa, 3358
- Candacia samassae**, distribution, Arabian Sea, 3994
- Candida**, 5798
 - hydroxylamine as source of nitrogen, 2558
- Candona*, 6946, 7000
- Candona candida*, 7000
- Candona neglecta*, 5546
- Canthigaster rivulata**, host of *Taeniocanthus canthigasteri*, 165
- Canthydrus pseudomorsbachi sp.n.**, Ceylon, 8613
- Caobangia**, boring in molluscs, 2606
- Cap Blanc**, plankton, 2360
- Capillaria salvelini**, from *Salvelinus fontinalis*, 1185
- Capingentidae**, keys, 8500
- Capitella capitata**, Los Angeles Harbour, 4556
- Capnia bifrons**, 7015
- Capnopsis**, distribution, Germany, 7005
- Capraia**, 4850
- Capture-recapture methods**, statistics, 2455
- Caranx**, 6371
 - composition of muscles, 6006
- Caranx crysos**, Gulf of St. Lawrence, 3025
- Caranx hippos**, symbiotic relationship with hermit crab, 6493
- Caranx ruber**, 5208
 - association with *Dasyatis americana*, West Indies, 5210
- Carapace**, *Astacus*, carotenoids, 677
- Carassius**, 3634, 8126
 - alarm pheromone and avoidance conditioning, 3630
 - effects of temperature of acetylcholinesterase, 3006
 - efference copy for eye movements, 3628
 - hybrids with *Cyprinus*, brain patterns, 4364
 - learning behaviour, 3627
 - optic and static, counter-rotation, 3631
- Carassius carassius**,
 - effects of agricultural chemicals on spawning, 8132
 - odour discrimination after histological regeneration of nervous systems, 8951
 - reproduction, Danube, 398
- Carassius auratus**, 3564, 4380, 5609, 5615, 6705, 7150, 7267, 7451, 8860, 8945
 - acclimation, 5325
 - acclimation temperature effects on lipid composition of gill mitochondria, 7301
 - brain serotonin and swimming activity, 4359
 - carbohydrate metabolism, 8947
 - changes in morphology and amino acid incorporation,

Carassius auratus, contd.

- regenerating optic neurons, 8940
- chemical memory transfer, 866
- chromatographic analysis, brain proteins, 7302
- chromatographic identification of formaldehyde, 6705
- developing erythroid cells, 400
- effects of pinealectomy on behaviour, 5322
- effects of temperature acclimation on fatty acid composition, lipids, 6444
- effects of X-irradiation on DNA synthesis and cell proliferation, 6445
- efferent influence on vestibular organs during movements, 7303
- factors affecting serum glucose levels, 6448
- gene duplication, 5327
- heterozygotes predominance, enzymes, dehydrogenase, Lake Erie, 5326
- histamine, 1905
- inhibition of Mauthner cells by allylglycine, 7306
- intestinal ATPase, 5328
- judging completeness of hypophysectomy, 397
- manoeuvrability, 8944
- mercury pollution, 7451
- microscopy of pineal organ, 5321
- morphine metabolism and tolerance, 8942
- neuromuscular junction effects, phenol, 8131
- odour discrimination, 8946
- optic tectum nerve fibre regeneration, 8939
- pineal organ, 5324
- protein transport in regenerating optic nerve, 7304
- purines responsible for silvering, 813
- regeneration, 8130
- regeneration of olfactory fibres, 8950
- repressive factor controlling reproduction, 5323
- response of peripheral blood cells to induced endocytosis, 399
- role of telencephalon in conditioned avoidance responses, 8941
- role of telencephalon in food-reinforced behaviour, 8948
- seasonal variation in oxygen consumption and body weights, 8949
- shape discrimination, 2031
- sperm ultrastructure, 7305
- stimulus control, 7300
- temperature adaptation and phospholipids in membranes, 6449
- thermal composition of respiratory enzymes, 865
- turnover time of ethanol, 8938
- uptake metabolism and elimination of DDT, 6446
- X-irradiation effects, 5320

Carbohydrase,

- activity, Crustacea, 6934
- Aplysia juliana*, *Thalamita crenata* and *Procambarus clarki*, 1977
- Paramecium caudatum*, 6859

Carbohydrates,

- acid mucopolysaccharide formation, oogenesis, *Nereis pelagica*, 4875
- agarose derivatives, agar from *Gelidium*, 6787
- aortic acid mucopolysaccharides, Vertebrata, 8877
- aquatic plants, 7314
- D-arabinose, Porifera, 7662
- blood, chitin synthesis, *Emerita asiatica*, 6014
- changes in culture system, *Chlorella*, 4655
- chemical nature, polysaccharides, *Acetabularia*, 4640
- Eucopia*, 5513

- excretion by *Nitzschia closterium*, 3810
 - exudates, Phaeophyta, 3256
 - fermentation of glucose, *Chlorella*, 7512
 - floridean starch, *Serraticardia maxima*, 5752
 - glucose catabolic pathway, *Cichlasoma bimaculatum*, 8986
 - glucose metabolism, brain, *Octopus*, 7098
 - glucose metabolism, *Chlorella protothecoides*, 6756
 - glucose metabolism, embryos, *Salmo trutta*, 8110
 - glucose production by meninges, *Petromyzon marinus*, 4292
 - glucose regulation, *Rana pipiens*, 4234, 4235
 - glycogen, denervated frog muscle, 7169
 - glycogen metabolism, 8454
 - glycogen storage and synthesis, gut, *Strongylocentrotus purpuratus*, 7925
 - glycollate utilization, *Chlorella pyrenoidosa*, 7517
 - Halocynthia aurantium, 8730
 - influence of eyestalk extract on, haemolymph, *Orconectes limosus*, 8588
 - invertebrates, Japan Sea, 7618
 - lipopolysaccharides, *Escherichia coli*, 6721
 - lipopolysaccharides, marine toxins, *Pseudomonas*, *Chromobacterium*, 5788
 - low molecular weight, from *Serraticardia maxima*, 1086
 - marine algae, 1736
 - metabolism, carp, 8120
 - metabolism, dynamics of glycogen, embryology, *Carassius auratus*, 8947
 - metabolism, effect of hormones FTC on glycogen level, *Tilapia mossambica*, 9004
 - metabolism, effect of interrenals, *Rana temporaria*, 5116
 - metabolism, effect of red and blue light in *Chlorella*, 552
 - metabolism, nervous system, Invertebrata, 7097
 - metabolism, *Paramecium caudatum*, 6859
 - metabolism, *Prymnesium parvum*, 5683
 - metabolism, supercooled *Fundulus heteroclitus*, 6557
 - methylglucose uptake, *Chlorella*, 5713
 - mucopolysaccharides, changes in concentration, perivisceral fluid, *Strongylocentrotus intermedia*, 7922
 - mucopolysaccharides, test, *Ciona intestinalis*, 7941
 - Orconectes limosus*, 207
 - phytoplankton, Pacific, 3713
 - γ -polysaccharide, *Tichocarpus crinitus*, 7545
 - polysaccharides, Phaeophyta, 6781
 - serum glucose levels, *Carassius auratus*, 6448
 - soluble, physiology, *Serraticardia maxima*, 4726
 - starch-degrading enzymes, culture, *Chlorella*, 7515
 - sugars, *Serraticardia maxima*, 5752
 - sulphated polysaccharides, Grateloupiceae, 7541
- Carbon,**
- ATP as indicator of total biomass, marine sediment, 6637
 - carbonate, interaction with blue-green algae, 1030
 - determination, industrial wastes, 6655
 - dissolved organic, determination in seawater, 1694
 - equivalent, zooplankton, 1668
 - estimation of in water, 509
 - fate when photosynthetically assimilated in Cyanophyceae, 1031
 - organic calculation of content in seawater, 3075
 - regulation of photosynthesis metabolism, *Chlorella pyrenoidosa*, 6759
 - sources in fertilized fish ponds, 2380

Carbon, contd.

- sulphur interaction, meromictic lakes. 5521
- supply during phytoplankton bloom, Black Sea. 4485
- use by *Asellopsis intermedia*. 2629

Carbon dioxide,

- action on light-dependent Cl^- uptake in *Elodea*. 79
- Chlorella*, *Chlamydomonas*. 4654
- Chlorella*, effect on oxygen. 4658
- effects on chloride fluxes, gastric mucosa, *Rana nigromaculata*. 5108
- effects on growth and development of amphibious plants. 1133
- exchange, relation with pigment composition in *Anacystis nidulans*. 1023
- fixation, blood, *Arenicola marina*. 3956
- fixation, *Chlamydomonas reinhardtii*. 5699
- fixation regulation, *Chlorella*. 6758

Carbon monoxide,

- diffusing capacity, *Ameiurus nebulosus*. 5318
- poisoning in *Arenicola marina*. 2621
- promoting effect on sporocarp formation, *Salvinia natans*. 5815

Carbonic anhydrase,

- in boring organ of *Urosalpinx*. 2780
- shell boring in *Purpura* (Thais) *lapillus*. 2770

Carboniferous, *Aphrophyllum rugosa*. 1852

- Carboxylase*, *Chlamydomonas reinhardtii*. 5699
- Carboxypeptidases*, gastric juice, *Astacus*. 178
- Carboy microcosms, NO_3 and PO_4 . 3149
- Carcharhinus*, distribution, Georgia. 4295
- Carcharhinus falciformis*, commensalism with pelagic fish. 5208

Carcharhinus milberti. 8879

Carcinogens, see Cancer and carcinogens.

Carcinus. 4911, 7773

- Carcinus maenas*. 7089, 8515
 - absence of blood-brain barrier. 1904
 - abundance in relation to temperature. 6008
 - deficiencies as experimental animal. 2703
 - effects of biogenic amines on melanophore activity. 6053
 - evolution of haemolymph proteins during moulting cycle. 6965
 - evolution of haemolymph proteins during oogenesis. 6966
 - feeding behaviour. 6007
 - firing patterns of movement receptors. 8571
 - haemolymph proteins. 3386
 - haemolymph proteins, effects of fasting. 3387
 - histamine. 1905
 - immunology of trypsin and protease. 1233
 - integrative properties of a reflex motoneuron in brain. 685
 - magnesium excretion. 1236
 - neuronal components of optic nerve. 4035
 - physiology of antennal gland. 682, 683
 - release and function of moulting hormone. 6009
 - synchronization of locomotor tidal rhythm. 1237
 - temperature dependence of metabolic rate. 681
 - teratological deviations. 3409
 - water flow through respiratory system. 684

Carcinus mediterraneus, temperature dependence of metabolic rate. 681

Cardiantigen, cholesterinized, preparation from Thunnus and its value in serodiagnosis of syphilis. 917

Cardiomya isolirata sp.n., diagnosis. 731

Cardisoma. 7690

Cardita carpenteri. 7878

Cardita semiorbiculata. 7878

Cardita variegata. 7878

Cardita ventricosa. 7878

Carditacea, morphology and evolution. 7878

Cardium lamarki. 9069

Careproctus cameliae, taxonomy. 8855

Careproctus longipennis. 5164

Caretta caretta, analysis of artificially incubated eggs. 326

Carex bigelowii. 4777

Carex rotundata. 4777

Caribbean Sea,

- calanoid copepods. 153
- Cladophora* spp.n. 2513
- distribution of *Polycanthus senegalensis*. 3330
- Nephropides caribaeus* gen. et sp.n. 1263
- plankton. 3718
- Polystrata fosliei*. 3273
- Portunus binoculus* sp.n., reported. 203
- productivity. 3080
- red tides. 3849

Caridea, bathypelagic, Indian Ocean. 8560

Caridina rajadhari, effect of eyestalk removal on oxygen consumption. 8572

Caristius groenlandicus, distribution, northwest Atlantic. 4445

Caristius macropus. 5164

Carneophallus spp.n., Louisiana. 4854

Carneophallus basodactylophallus sp.n., life-cycle. 642

Carneophallus choanophallus sp.n., life-cycle. 642

Carnosine, in muscles of *Delphinus*, *Parathunnus* and *Balaenoptera*. 788

β -Carotene, found in cells of *Dunaliella salina*. 1051

Carotenoids,

- in carapace of *Astacus*. 677
- of *Clibanarius misanthropus*. 1241

Carp,

- acetylcholine esterase from brain. 406
- aquaculture, USSR. 3638
- diseases, control, USSR. 4366
- parasites and diseases, fish farms, USSR. 4370
- physiology. 8120
- silver, phylogeny, blood platelets. 7967

Carpilius convexus. 4022

Carpilodes cyprinus, parasitism by *Pellucidhaptor* spp, Illinois. 5879

Cartilage, gill, *Limulus*. 219, 717

Cartilage keratosulphate, degrading enzymes, whale. 8836

Carupella banlaensis sp.n. 6985

Carybdea. 4834

Caryophyllaeidae, host specificity. 5882

Caryophyllaeus laticeps, seasonal incidence and development, River Avon. 8493

Caspian Sea, morphology of psammophilic ciliates. 86

Cassiopea, symbiotic relationship with *Symbiodinium microadriaticum*. 3917

Cassiopea andromeda, zooxanthellae and their importance in strobilation. 3918

Cassiss madagascariensis, spawn, South Florida. 3441

Castor,

- distribution in acid main drainage, Virginia. 7215
- food chains, Arctic. 8028
- utilization of wood plants, Ohio. 7213

Castor canadensis, seasonal energy expenditure at northern limit of distribution. 331

Castor fiber, skull measurements. 7214

Castradella otophthalma, systematic. 8494

Castration,

- effect on oviduct, *Rana esculenta*, 5106
- effect on seminal vesicles, *Heteropneustes fossilis*, 5336

Casuarina, 7596

Catablema, 4832

Catalase, freshwater bivalve, 6129

Catalogue, Hemiptera from Bouches-du-Rhone, 704

Catapaguioides,

- revision of genus, 4036
- Saint Laurent, 7807

Catastomus catastomus, altitudinal distribution, South Platte River, Colorado, 861

Catch statistics,

- adult herrings, Norway, 5238
- age and length composition, anchovy fishery, 3607
- California partyboat fishery, 1947-1967, 7244
- Clupea harengus, Ireland, 8869
- Coregonus clupeaformis, Minnesota, 7273
- Embiotocidae, California, 3656
- fishing industry, Kyushu, 7240, 7241
- grilse, 8896
- herring fishery, Baltic, 5249
- herring fishery, Germany, 5237
- herring fishery, southwest Ireland, 5251
- Heterosomata, Baltic Sea, 5460
- juvenile tuna, Hawaii, 7377
- Lates mariae, Lake Tanganyika, 6500
- lobster fishery, Rio Grande de Norte, 6037
- North Pacific, salmon, 3611
- Norwegian herring fishery, 5239
- Pacific salmon, nets and longline, 3610
- Palinurus elephas, Ireland, 8592
- Penaeidae, USA, 7798
- Pisces, lakes, 8867
- Platichthys flesus, Baltic Sea, 5461
- Pseudoscapha, Thrissoles, Lactarius, India, 8156
- Salmo, 8894
- Salvelinus, Salmo, Au Sable River, 6434
- Thunnus alalunga, New Zealand, 7380
- Thunnus atlanticus, Rio Grande do Norte, 6543
- tuna fishery, Sea of Japan, East China Sea, 5423
- tuna long-line fishery, 6537
- whaling industry, 7229
- whaling industry, 1968-1969, 7230

Catching apparatus, for crabs, 1899

Catena viridis, 7425

Catenaria anguillulae, requirements for growth, 3862

Cateria submersa sp.n., North Sea, 1867

Cation-activated nucleotidase, cell envelopes of marine bacterium, 1095

Cations, algal requirements, 2509

Catla catla, 6450, 6471

- cell response to chloride- and sulphate-enriched media, gills, 6560

Catostomidae, 8038

Catostomus, 8133

- activity periods, Lake Heming, 4319
- aquaculture, 2923
- functional and evolutionary dynamics of polymorphic esterases, 8133
- helminths, 2995

Catostomus catostomus, year-class studies, Lake Superior, 401

Catostomus commersoni, 5565

- fluorescence of muscle, 402

Catostomus macrocheilus, neoplasms, 4329

Catostomus santaanae, life history, 8952

Caudal process, development and heredity, Xiphophorus

spp. 949

Caulerpa, 4585, 8330

Caulerpa freycineti var. typica f. lata, fruiting season in Singapore, 2522

Caulerpa hummii, Venezuela, 32

Caulerpa okamurai, 3189

fruiting season, 2521

Caulerpa prolifera, ultrastructure, 33

Caulerpa scalpelliformis var. denticulata, fruiting season, 2520

Caulerpa sertularioides,

development, 2503

fine structure of growing point, 1040

Caulerpa spathulata sp.n., Solomon Islands, 8280

Caulerpa verticillata, 3437

Caulobacteriaceae, 9058

Caulochytrium gloeosporii, morphology and life-cycle, 601

Caulolatilus princeps, extensions of known northern range limits, 431

Caves and cave fauna,

Amphipoda, Istria, 4910

Belgium, 7621

Bogidiella somala sp.n., Somalia, 5997

Bufo arenarum, 6217

Copepoda, North Italy, 3997

Crustacea, Virginia, 7742

Geocentrophora cavernicola sp.n., Virginia, 5901

harpacticoid copepods, Romania, 160

Hungary, 2709

Hydrobiinae, Switzerland, 7845

hydrobiology, 5543

Isopoda, Cambounés cave, 7744

Isopoda, Portugal, 8552

Madagascar, 8432

Mexiconiscus laevis, 7784

Protozoa, Kentucky, 7622

Texas, 8433

Cecina manchurica, anatomy and taxonomy, 1979

Cellaria mawsoni, 6185

Cellarinelloides crassus gen. et sp.n. 6185

Cells, 3906, 7012

acid-secreting, Gastropoda, 3452

adhesion, Porifera, 6885

aggregation, Porifera, 6875-6877

alcohol dehydrogenase localization, Astasia longa, 8393

amoeboid movement, 7626

argyrophil adenohypophyseal, Salmo irideus, 8924

artificial heterokaryons, salamanders, 2848

atypical division, Colpidium kleinii, 6839

auxocyte nuclei protein emission, Amphibia, 5096

axon, monactin effect on permeability, Loligo

pealei, 7901

axonemes, enzymatic properties, Pecten irradians, 7890

binocular neurons, frog, 7966

birefringent layer of eggs, Pectinaria gouldii, 4878

Boodlea, Chamaedoris, 8329

Brachydanio rerio, 6443

brain cell number, Octopus vulgaris, 7101

brain, frog, 7964

brush border, intestine, Xenopus laevis, 6281

Calcarca, 7658

calcium efflux, 6243

capacities, blastema, regenerating limb, salamander, 8740

Cerastoderma edule, 7076

carotenoid pigments; Allopora californica, 7666

Cells, contd.

- cell content, 3820, 4163
- cell content, *Euglena*, 3831
- cell content, *Scenedesmus*, 3831
- cell cycle, effect of actidione on *Stylonychia notophora*, 3898
- cell inclusions, 3882, 3905, 3942
- cell inclusions, *Chaenea vorax*, 3881
- cell inclusions, *Paramecium aurelia*, 3893
- cell inclusions, *Planaria*, *Dendrocoelum*, *Polycelis*, 6906
- cell inclusions, ultrastructure, 3902
- cellular and humoral aspects, primary immune response, *Bufo marinus*, 6213
- central nervous system, *Lymnaea stagnalis*, 7044
- Chlorella vulgaris*, 3825
- chloride cells, *Anguilla japonica*, 4442
- chloride fluxes in crab muscles, 4942
- chloride-type, pseudobranch-type, *Paralichthys lethostigma*, 3706
- chloroplasts, *Acetabularia*, 4640
- chloroplasts, *Acetabularia mediterranea*, 4638
- chloroplasts, action spectrum of photosynthesis, *Euglena gracilis*, 4737
- chloroplasts, division, *Chlamydomonas reinhardtii*, 4650
- chloroplasts, drug effects, *Elodea*, 4783
- chloroplasts, *Euglena gracilis*, 6799
- chloroplasts, inheritance, *Cosmarium turpinii*, 4667
- chloroplasts, light dependence, *Nitella*, 5723
- chloroplasts, multiplication, *Acetabularia* spp., 5689
- chloroplasts, structural changes, amitrol effects, *Poteriochromonas stipitata*, 6746
- chloroplasts, ultrastructure, *Porphyridium*, 4719
- choanocytic origin of male germplasm in *Aplysilla rosea*, 5857
- chorioidal tapetum lucidum, *Acipenser transmontanus*, 4440
- chromosome constitution, *Podocnemis* spp., 6299
- composition of cellular envelopes, *Anabaena cylindrica*, 6736
- control of chloroplast senescence, *Elodea* leaves, 8424
- cortical cytoplasmic filaments of cleaving eggs, structural element corresponding to contractile ring, 5859
- crystallization of muscle aldolase, *Esox*, 6398
- cyanoblast, *Limulus polyphemus*, 6094
- cysts, *Tillina magna*, 7650
- cytochemistry during zoosporogenesis, *Tetracystis*, 4697
- cytochemistry, ectoderm *Hyla crepitans*, 3508
- cytochemistry, fish extraocular muscles, 3702
- cytokinesis, *Spirogyra*, 4694
- cytology, *Goniodoma*, 3287
- cytoplasmic inheritance, *Paramecium aurelia*, 7641
- cytosystematics, *Tricladidae*, Tyrrhenian islands, 4850
- decay of γ -particles in germinating zoospores of *Blastocladia emersonii*, 3861
- deformations, *Tetrahymena pyriformis*, 4821
- degeneration and regeneration, motor neurons, *Procambarus clarkii*, 4968
- development, *Eudendrium racemosum*, 4843
- differentiation, *Ambystoma*, 7148
- differentiation, free energy, *Hydra*, 8471
- differentiation, gemmula, *Ephydatia fluviatilis*, 6887
- differentiation, *Porifera*, 6884
- differentiation, *Rana pipiens* oocytes, mitochondria and nucleolus-like bodies, 4238
- dimensions, of *Anabaena variabilis*, 11
- disintegrated algae, *Scenedesmus obliquus* use, 4692
- division, as effected by actinomycin D in *Euglena*, 1090
- division, effects of nitrite on photosynthesis, *Skeletonema costatum*, 3813
- division, in *Oedogonium*, 1054
- division, inhibited by cysteamine and cystamine in *Euglena*, 1091
- division, of *Chlamydomonas*, effect of methyl glyoxal, 1043
- division, preparation of promoting materials from freshwater algae, 14
- division, synchronous, in *Anacystis nidulans*, 525
- DNA content of nucleus, *Rana temporaria* embryo, 6251
- DNA, *Paramecium aurelia*, 4814
- Dugesia dorotocephala*, 7681
- ectoderm, *Torpedo marmorata*, 7264
- effect of intracellular polarization of horizontal cells, *Esox*, 6399
- effect of nalidixic acid on *Euglena* plastids, 8399
- electrical communication between, embryos, *Asterias forbesi*, 7109
- electrical coupling, *Fundulus heteroclitus*, 6556
- elongation, in *Oedogonium*, 1054
- endostyle, amphioxus, 4205
- epidermis, 3945
- Euglena gracilis*, Warburg effect, 4735
- eukaryote, *Gyrodinium cohnii*, 7556
- exopinacocytes, 3905
- extra-hypothalamic neurones, brain, *Tilapia mossambica*, 7372
- extraventricular mitosis, nervous system, *Amphibia*, 7198
- fertilized eggs, crystalline components, 6182
- fluorescent neurones, significance, *Hirudo medicinalis*, 8528
- formation of centriole and similar structures, cell division, *Labyrinthulida*, 8448
- formation of RNA-DNA hybrid, 4249
- ganglia, functional organization, invertebrate, 8427
- ganglion cells, detector properties, retina, *Esox*, 6400
- gas-vacuoles, heterocysts, *Cyanophyta*, 3201
- gas-vacuoles, structure, 3204
- germinal, *Anura*, 7144
- giant axon, current separations, *Myxicola*, 5940
- giant axon, effects of tetrodotoxin, *Loligo pealei*, 7099
- giant axon, leak current rectification, *Myxicola*, 5941
- giant axon, *Todarodes sagittatus*, 7104
- giant nerve fibre, *Dosidicus gigas*, 7899
- gibberellins, algae, 3188
- gill mitochondria, influence of acclimation temperature on lipid composition, *Carassius auratus*, 7301
- glial and interstitial, histochemical localization of cholinesterase, *Doridae*, 7027
- Golgi bodies, *Rana pipiens*, 5109
- Golgi-body evolution, *Griffithsia flosculosa*, 4713
- Golgi vesicles, 4079
- Golgi vesicles and synaptic vesicles, *Octopus*, 8691
- granulated cells of heart, *Lymnaea stagnalis*, 7046
- granules, *Bufo arenarum*, 8747
- Griffithsia*, ionic fluxes, 6789
- gut mucus, *Echinoidea*, 8700

Cells, contd.

- heterocyst germination, *Gloeotrichia ghosei*, 8305
 histochemistry, lipids in neurons, *Anodonta cygnea*, 7069
 hyperpolarization of muscle, 6244
 immune cell formation, organs, *Rana temporaria*, 7997
 immune cell induction, seasonal and temperature dependence, *Rana temporaria*, 7996
 induction of reproductive cells, *Volvox rousseletii*, 6780
 inductive factors of interstitial cell differentiation, *Hydra*, 5872
 inhibition of Mauthner cells by allylglycine, *Carassius auratus*, 7306
 injury, ion movements, toad bladder, 7952
 isolated contractile vacuoles, *Amoeba proteus*, 7631
 isolation of synaptic vesicles, brain, *Octopus*, 8693
 intestinal epithelium, influence of temperature and X-irradiation, *Oncorhynchus kisutch*, 6406
 intracellular site, calcium activation, skeletal muscle, 6242
 karyological study, deep-sea fish, 5227
 killing of melanophores, *Pterophyllum scalare*, 7369
 leucoplasts, *Nitzschia alba*, 8318
 light-triggered membrane potential changes, *Elodea densa*, 7602
 lymphocytes, 3905
 macronuclear anlage, *Stylonychia notophora*, 4819
 median nucleus histology, *Anura*, 5097
 melanism, *acanthopterygii*, 6486
 melanophores, continuous recording of responses, *Pterophyllum eimekei*, 8998
 melanosomes, crystal sacs, tapetum lucidum of *Dasyatis sabina*, 8880
 membrane potential changes under magnetic field, *Nitella flexilis*, 8358
 mesenchymatous, *Veretillum cynomorium*, 7679
 mesoglea, *Cyamon neon*, 4829
 mesoglea, fibre system changes in morphogenesis, *Hydra*, 5871
 microfibrils, shell gland, *Artemia salina*, 7715
 microtubules, *Notonecta glauca*, 4991
 migration, *Anura*, 3506
 mitochondria formation, oocytes, *Triturus pyrrhogaster*, 5131
 mitosis, *Anacystis nidulans*, 4610
 mitosis, light reversal of colchicine action, *Lytechinus variagatus*, 8720
 mitosis, *Noctiluca miliaris*, 8401
 mitosis of retinal cells, *Protopterus aethiopicus*, 7416
 mitotic apparatus of eggs, *Echinodermata*, 7117
 morphogenesis, algae, 3187
 multivesicular bodies from nuclear envelope, *Perca fluviatilis*, 6509
 muscle cells, depolarization, frog, 6240
 muscle cells, enzyme content, *Mollusca*, 4111
 muscle cells, frogs, 6235, 6239
 muscular relaxation, latency, frog, 7971
 mutagenic effect of ethyleneimine, *Chlorella*, 5717
 myoblasts, *Amphibia*, 6260
 myofibrillogenesis, muscles, 6427
 myoneural junction, transfer function, frog, 7973
 nematocysts, amino acid content, *Chrysaora quinquecirrha*, 5866
 nematocyst, ionic effects on discharge, *Aiptasia pallida*, 8466
 nematocytes, microscopic investigations, 3919
Nematoplane nigrocapitula, 5907
 neoblasts, regeneration, *Planaria*, 8485
 nerve cells, *Procambarus clarkii*, 6048
 nerve cells, septa, *Procambarus clarkii*, 6047
 nerve, electrical activity, *Anodonta cygnea*, 7072
 nerve fibre layer and neurocord, enteropneusts, 4211
 nervous cells, electrophysiology, *Asterias rubens*, 4180
 neuromasts, larvae, *Cirrhina mrigala*, 7308
 neuromuscular junctions, toxin effects, frog, 7974
 neurones, morphogenesis of cytosomes, *Anodonta cygnea*, 7073
 neurons, heart, *Lymnaea stagnalis*, 8660
 neurons, *Octopus*, 8691
 neurons, parieto-visceral ganglion, *Aplysia*, 5000
 neurosecretory cells, *Daphnia pulex*, 3984
 neurosensory cells in *Hydra* differentiation, 3927
 node of Ranvier, frog, 7983
 nonmyelinated nerve, frequency-dependence of action potential, *Anodonta cygnea*, 7065
 nuclear division in *Oedogonium cardiacum*, 4676
 nuclear migration inhibitors, *Micrasterias*, 6768
 nuclear pockets and projections, melonomas, platyfish-swordtail hybrids, 8157
 nucleolar, variation of organizers, 6221
 nucleoli, DNA distribution, oocyte, *Amphibia*, 5129
 nucleus, *Chlorophyta*, 7499
 nucleus dependent lactic dehydrogenase, *Acetabularia*, 7502
 nucleus isolation, *Euglena gracilis*, 4742
 occurrence of spirochaete-like organism in cells, *Artemia salina*, 5947
Oedogonium cardiacum, Golgi bodies, wall structure and formation, 4677
 oocytes, Salamander, 7201
 origin and growth, cortical granules, oocytes, *Rana pipiens*, 5110
 papilloma-like growth, siphon, *Tresus nuttalli*, 6153
 κ -particles electron transport system, *Paramecium aurelia*, 8451
 peroxidase cells, larvae, *Ascidia*, 7141
 physiological comparison, *Coccolithus huxleyi*, 8313
 physiology, polarity, algae, 3187
 pinacocytes, 3905
 pit connections, *Bangia fuscopurpurea*, 7538
 pituitary, activity, *Poecilia*, 9041
 plasmalemmasomes, *Petalonia debilis*, 4702
 polyphosphate bodies and gas vacuoles, ultrastructure *Cyanophyta*, 8295
 polysomes, *Spisula solidissima*, 7894
Porifera, 6878, 7657
 protein synthesis, *Acetabularia mediterranea*, 7503
 protonema, *Bryopsis*, *Pseudobryopsis*, 6752
 Purkinje inhibition, *Salmo gairdneri*, 5296
 pyrenoid formation, *Chlamydomonas reinhardtii*, 4650
 reactions of silverline system to mechanical damage, *Ciliata*, 6832
 reaggregation of dissociated, sea urchin embryos, 7123
 reaggregation, *Porifera*, 8459
 receptor hairs, *Homarus gammarus*, 7774
 regeneration of protoplasts, *Uronema gigas*, 6777
 relative roles, nucleus, cytoplasm, *Amoeba*, 7630
 renal corpuscle, *Petromyzon marinus*, 4289
 responses of muscles to sinusoidal changes in

Cells, contd.

- length. 7186
- retinal ganglion, receptive fields. 4227
- retinal, light-induced potentials spread, Teleostei. 6378
- ribosomes. 4799
- ribosomes, *Artemia salina*. 3981
- ribosome characterization, *Euglena gracilis*. 7554
- ribosomes, RNA, *Euglena gracilis*. 4739
- ribosome-specific transfer factors, *Prototheca zopfii*. 4681
- RNA in single neurons, *Aplysia*. 8651
- RNA, *Urechis caupo*. 7711
- scale formation, *Pleurochrysis schertellii*. 5661
- Schwann cells, cytochemistry and ultrastructure, lobster. 6020
- secondary mesenchyme cells, microtubules and filaments. 4178
- secretion, *Coris julis*. 5392
- secretory cells in intestine, *Diplodiscus subclavatus*. 5896
- serotonergic nerve fibres, heart, *Aplysia*. 6102
- situs vicerum, *Triturus alpestris*. 7196
- size, *Diatomaceae*. 5668
- size, in wild type and growth mutant of *Ulva mutabilis*. 1063
- skeletal muscle, emptying, *Limulus*. 8636
- Skeletonema costatum*, photosynthetic variation. 5685
- spicules, *Spongilla lacustris*. 6867
- spindle formation, *Lithodesmium undulatum*. 4627, 4628
- sporulation, *Minchinia costalis*. 5840
- Stannius corpuscles*, *Clarias lazera*. 8135
- stimulation and recording, *Aplysia*. 8650
- stimulation of somatotrophic cells, hypophysis, *Anguilla anguilla*. 6458
- subribosomal particles, *Tetrahymena pyriformis*. 7648
- summer, adrenal, seasonal variations, *Rana tigrina*. 4237
- surface, immunology, *Porifera*. 4827
- synaptic vesicles. 3978
- synchronous, monodisperse suspensions in defined medium. 1823
- tentacles, ultrastructure, *Chyrsaora quinquecirrha*. 4838
- thymic myoid, *Trionyx spiniferus*. 2894
- thyroid, interaction with gonadotropic cells, *Poecilia*. 9040
- thyrotropin secreting, *Anoptichthys jordani*. 3701
- transplantation, *Anura*, *Urodela*. 7145
- transplants, *Discoglossus pictus*. 5086
- trichocyst development, *Paramecium aurelia*. 4811
- tubular nephron, *Petromyzon marinus*. 4289
- tubular trichocysts, *Pyramimonas grossi*. 8364
- tunicate heart. 5061
- ultrastructural changes, newt. 4246
- ultrastructure of digestive tubules, *Cardium edule*. 7076
- ultrastructure, *Paramoeba eilhardi*. 6860
- variation in activity of nucleolar organizers. 6221
- viability, *Protozoa*. 4809
- visual cells, *Protopterus*, *Neoceratodus*, *Polyodon*, *Calamoichthys*, *Anura*, *Lepisosteus*. 4474
- Xenopus laevis*, nuclear pore flow rate. 3527

Cellulase,

- induction and wall extension, *Achlya*. 1123
- Orchestia gammarella*. 6034

Cellulomonas. 3726

Cellulose,

- crystallite size. 2504
- degradation of, by *Archangium violaceum*. 600
- produced by Golgi apparatus of *Pleurochrysis schertellii*. 1768

Cellvibrio. 3726

Cell wall,

- Atkinsiella dubia*. 1116
- cellulosic component, produced by Golgi apparatus of *Pleurochrysis schertellii*. 1036
- chemical composition, *Chlamydomonas*. 3253
- constituents in *Apjohnia laetevirens*. 3820
- developing, *Pediastrum boryanum*. 1781
- development, *Anabaena ambigua*. 8297
- Petocarpus acutus* and *Elachista fucicola*. 1785
- structure, *Pyrocystis*. 4746
- Trichodesmium erythraeum*. 1032

Cenocorixa spp. 3742

Cenozoic, marine molluscs, N. America. 222

Central Africa, trematodes from fish. 1857

Central America,

- Hydroides gairacensis*. 142
- speciation of *Macrobrachium*. 2690

Centrarchidae. 7449, 8038

- carotenoids. 8983
- evolution. 8158
- gonads and reproduction. 8159

Centrifugation, micronekton, wet weight. 1725

Centriscidae. 5427

Centriscus scutatus. 5427

Centrobranchus nigroocellatus, vertical diurnal migration, Madeira. 9027

Centroceras clavulatum. 8278

Centrocorisa. 7002

Centrolophidae, distribution off S. America. 887

Centrolophus. 5221

Centrolophus niger. 5163, 5164

- reported from SW Atlantic for first time. 887

Centronotus, rejected gen. 728

Centropages. 3995

Centropages krøyeri, reproduction, development, Black Sea. 1883

Centropages ponticus. 7473

- Black Sea. 3989

Centropages typicus. 9042

- life histories. 3359

Centrophorides. 4270

Centrophorus. 4270

Centropistes striatus. 7269

Centrorhynchus polemaeti sp.n. 7692

Centroscyrnus crepidator, biochemistry of vitellus. 5209

Centrostephanus longispinus, reaction of chromatophores to light. 753

Centrostephanus rogersii, distribution, New Zealand. 4189

Cephalic organ, *Lineus ruber*. 650

Cephalochordata,

- chitin. 6198
- Madras, pharyngeal region structure. 4204
- Madras, postpharyngeal regions structure. 4203
- Cephalogonimus americanus*, parasitism of *Rana clamitans*. 5102

Cephaloidophora warekara sp.n., parasitic in *Caprella*. 1172

Cephalopoda,

- branchial heart and vessels. 2817
- Canary Islands. 750

- fatty acids, 4171
glio-vascular system, 269
Japan, 7897
neurovenous tissues, 3488
North Atlantic, 3484
- Cephalotrichum**, 3889
- Cepola rubescens**, 5163
- Ceractinomorpha**, 6872, 6884
- Ceramaster**, 6177
- Ceramiaceae**, 4582
systematics and ecology, Argentina, 4705
- Ceramiella**,
distribution, Caribbean, 5739
taxonomy, 4709
- Ceramium**, 4705
ecology, Tanzania, 8381
- Ceramium diaphanum**, 8281
- Ceramium rubrum**, 8277, 8281
- Cerastoderma edule**, 7089
interpopulation, variability and spatial distribution,
Sea of Azov, 6133
ultrastructure of digestive tubules, 7076
ultrastructure of eye and optic tentacles, 7879
- Ceratites**,
ecology, Upper Cretaceous, Germany, 7092
shell aberrations, Germany, 5032
Triassic, Germany, 7093
- Ceratium**, 3738, 3740, 5488
- Ceratium hirundinella**, morphology, ultrastructure,
7394
- Ceratium lunula**, phagotrophic feeding, 1792
- Ceratoneis**, 3969
- Ceratophryidae**, genic action and polymorphism, 301
- Ceratophrys calcarata**, genic action and polymorphism,
301
- Ceratophrys dorsata**, genic action and polymorphism,
301
- Ceratophyllum**, 5523, 5813, 8137
- Ceratophyllum demersum**, 3309
day-time variations in production rates, 7597
primary productivity, 4499
production, 1674
productivity, pH and P/R ratio, 4500
- Ceratoporella**, 3911
- Ceratoporella nicholsoni**, 6871
- Ceratopsion**, 4824
- Ceratoscopelus**, 8039
- Ceratoscopelus townsendi**, 5442
- Cercaria chackai sp.n.**, Kerala, India, 5886
- Cercariae**,
from freshwater molluscs, India, 1173
parasites of Limnaea, India, 6898
- Cercion hieroglyphicum**, aging, using parasitic mites,
2729
- Ceriodaphnia cornuta**, 8540
predation-balanced polymorphism, 1214
- Ceriodaphnia pulchella**, Kiev reservoir, 3982
- Ceriosporopsis**, 6815
- Cerithium**, 8330
- Cerithium ornata**, parasitism by Cloacitrema philipp-
inum sp.n., Philippine Islands, 5890
- Certonardoa semiregularis**, hermaphrodites, 3498
- Cervimunida princeps**, 8559
- Cervinia**, 4003
- Cestoda**, 8179
amino acid pools, Massachusetts, 8483
parasites, amino acid composition, 3339
- Cestopagurus**,
revision of genus, 4036
- Saint Laurent, 7807
- Cetacea**,
British Columbia, 3549
catch statistics, 1967-1968, 7229
catch statistics, 1968-1969, 7230
central nervous system, 4256
distribution, California, 7218
enzymatic degradation of cartilage keratosulphate,
8836
feeding rates, 2901
hydrogen-deuterium exchange, sperm whale metmyo-
globin, 8837
lactation, 2907
sperm whale distribution, Antarctic waters, 7231
vocalization, 5159
- Cetengraulis mysticetus**, 5171
- Cetitrema foliiformis gen. et sp.n.**, parasite in liver
of Balaenoptera brydei, 5887
- Cetitreminae subfam.n.**, (Campulidae), 5887
- Cetomimus**, taxonomy, 4446
- Cetomimus hempeli sp.n.**, 4446
- Cetorhinus maximus**, structure of glycopeptides of
Lorenzini jelly, 5216
- Ceylon**, village fish tanks, 5185
- Chad**,
Lake Chad, Insecta distribution, 3427
Lake Chad, new nematode parasites, 3340
Lake Tchad, 3208
Phyllopoda from the Ennedi, 668
- Chaenea vorax**, morphology and fine structure, 3881
- Chaenichthys rugosus**, vascularization and respiratory
organs, 5391
- Chaenobryttus**, 8158
- Chaenobryttus gulosus**, 8159
- Chaenocephalus aceratus**,
oxygen uptake in haemoglobinless fish, 8166
respiration characteristics of haemoglobin-free fish,
7352
- Chaenogobius urotaenia**, development, 432
- Chaetoceros**, 4486, 5488, 7087, 8229
- Chaetoceros affine**, 5665
- Chaetoceros affinis**, ecological factors and growth,
3806
- Chaetoceros f. inaequale form.n.**, 5665
- Chaetoceros gracilis**, uptake of phytoplankton during
growth, 5503
- Chaetoceros laciniosum f. protuberans form.n.**, 5665
- Chaetodon bennetti**, distribution, Laccadives, 4303
- Chaetodon strigangulus**, parasitism by Paradiscogaster
eniwetokensis sp.n., 8508
- Chaetodontidae**, 7663
- Chaetognatha**, 6605, 7930, 9052
Agulhas Current, 2840
distribution in Southern Ocean, 2042
experimental feeding, 629
- Chaetomorpha**, 8281
- Chaetomorpha darwinii**, growth and development, 34
- Chaetomorpha melagonium**, 8328
crystallite size, 2504
- Chaetopterus variopedatus**, 7618, 8431
reproduction, 3347
- Chaetosphaeridium**, sexual reproduction, 4643
- Chalinura spp.**, parasitism by Cyclocotyloides pinguis,
Oregon, 5888
- Chalixodytes tauensis**, distribution, Laccadive, 4303
- Chamaedoris auriculata**, cytology, India, 8329
- Chamaesipho columna**, embryology, 173
- Champia parvula**, 8281
- Chama striatus**, 7342, 7343

- Channomuraena vittata*. 9014
- Chanos*, larvae, Mannar. 5232
- Chanos chanos*. 5522
- infestation by parasitic isopod. 3626
- use of dextran blue for estimating intestinal water volume. 9018
- Chaoborinae*. 7207
- Chaoborus*. 5530
- bibliography. 8620
- Chaoborus crystallinus*, life history, Holland. 3421
- Chaoborus punctipennis*,
- larvae activity patterns. 2726
- light controlling vertical migration. 4099
- Chaos carolinensis*. 7626
- Chaos chaos*, pinocytosis and locomotion. 90
- Chara*. 3816, 3818, 9059
- electro-osmosis. 4645
- Lake Långsjön. 9059
- Chara corallina*, ion fluxes. 4644
- Chara foetida*, CCCP effects. 5696
- Character changes**, induced by heterologous nuclei in *Amoeba*. 1153
- Characteristics**,
- Limanda ferruginea*, New England. 6567
- world fisheries. 5169
- Charetum asperae*. 4776
- Charonia*. 7857
- type-sp. 728
- Charonia lampas*, degradation of keratosulphates. 7854
- Charophyceae**,
- Brazil, identification. 3816
- ecology. 1771
- freshwater species, Norway. 35
- India and south eastern US, compared. 551
- mineral nutrition. 550
- osmotic volume changes. 6751
- Charopsis*. 3818
- Charybdis*, larvae, Pakistan. 4917
- Chasmichthys gulosus*, melanophore responses. 4403
- Chauliodontidae*. 4306
- Chauliodus*, eye musculature. 6512
- Checklists**,
- algae, Florida. 5617
- algae, Itasca State Park, Minnesota. 5754
- Anthozoa, sessile populations of Glenan Archipelago. 3913
- Ascidia, Dakar. 4209
- Asteroidea, Tasmania. 4187
- Cidaroida, Gulf of Mexico. 4175
- Clupeoida, Malaya. 4311
- Crustacea from southwest Florida. 4024
- Echinodermata, Manila Bay. 4176
- fish. 4270
- hydroid of the Glenan Archipelago. 3912
- Odonata, British West Indies. 4105
- Polychaeta, Provence. 3955
- Vaucheria, Geneva region. 3815
- Cheilodipterus lachneri*, distribution, Laccadives. 4303
- Chelidonichthys kumu*, sound production, Japan. 6551
- Chelonia*,
- parasitized by triclad turbellarian. 1864
- sexual reproduction. 8012
- ureogenesis. 7204
- Chelonia mydas*,
- analysis of artificially incubated eggs. 326
- distribution, western Indian Ocean. 4251
- ecology, Costa Rica. 8013
- hearing. 2891
- retinal oil globule count. 8811
- Chelydra*. 6721
- Chelydra serpentina*. 5141
- chymotrypsin amino acids. 8807
- respiration. 778
- twining. 8806
- Chelys fimbriata*, aerobic respiration. 8808
- Chemical analyses, (see also Water)**
- acid mucopolysaccharides, aortic, Vertebrata. 8877
- base composition, DNA, Cancer pagarus. 6004
- brackish water, Chikugogawa River. 6626
- calcium in soft tissues, *Telescopium telescopium*. 6125
- dehydrogenase, *Amoeba proteus*. 5830
- discoloured crab meat. 8564
- eyes, *Bufo marinus*. 8750
- 'Katsuoobushi', *Katsuwonus pelamis*. 8190
- Lake Hayq, Ethiopia. 6620
- lithium, rubidium, sea water. 5556
- Mallotus villosus*. 832
- meat composition, *Callorhinus ursinus*. 8027
- Mediterranean. 3747
- molybdenum, lake waters. 6623
- plankton, Japan. 6594
- Rhodophyta, Mediterranean. 7535
- salt measurement in fish. 6337
- seasonal variations in *Ascophyllum nodosum*, Trondheimsfjord. 8371
- sexual polyps, *Hydractinia*. 6894
- vanadium, neutron activation analysis. 6644
- water. 6651
- water of Voronezh River. 6619
- water, sodium and potassium in nucleus and cytoplasm, oocytes, Amphibia. 8736
- Chemical assays**,
- hatching enzyme (chorionase) activity, *Oryzias latipes*. 7409
- insecticides, landlocked *Salmo salar*, Maine. 4342
- luciferase-luciferase, marine sediment. 6637
- PCP residues, water and fish. 6658
- plankton, Panama and Colombia. 6593
- protease, sea urchin. 6183
- vitamin C. 7476
- Chemical composition**,
- body wall, *Halocynthia aurantium*. 8730
- cell wall, *Chlamydomonas*. 3253
- cyclic sulphates. 8409
- elementary composition of *Sphaeroma serratum*. 4087
- fatty acids, *Orconectes limosus*. 4949
- food. 6338
- herbicides. 8271
- insecticides. 8269, 8270
- lipids, *Euphausia*, *Pleuroncodes*. 5514
- lipids, seasonal variations, *Orconectes limosus*. 4948
- lipopolysaccharide from *Anacystis nidulans*. 3796
- Littorina littorea*, seasonal variation. 6114
- milk, *Stenella* spp. 4267
- oils, Pisces. 8085
- Oncorhynchus* spp. 8099
- Paralithodes camtschatica*. 698
- Parapenaeus* flesh. 4066
- pesticides. 8272, 8273
- seasonal variations, *Patella vulgata*. 3446
- Sphagnum, *Sphagnum magellanicum*. 5817
- Syndesmis franciscana*. 2592
- thylakoids, *Chlamydomonas reinhardtii*. 5702
- tissues, *Sipunculus natans*. 8538

Chemical control,

- aquatic weeds, 4797
- biocides, plants and animals, 7482
- carcinogens, Mollusca, 8645
- Daphnia, 7718
- Diptera, 4080
- effects on freshwater fisheries, 3593
- floating larvicides, 7481
- marine fouling organisms, 5824
- microorganisms in sewage pollution, 7456
- molluscicides, 8644
- molluscicides, Biomphalaria, Lymnaea, 7848
- molluscicides, Chlorella, Tanzania, 7849
- Procambarus and Orconectes, 4080
- Simuliidae larvae, DDT, 8629

Chemical extraction,

- actin-like protein, sea urchin eggs, 7127
- alkaline phosphatase, intestinal mucosa, Anguilla japonica, 9026
- calcitonins, Salmo, 8089
- chlorophyll d, Grateloupia dichotoma, 4712
- chlorophyllase, Chlorella protothecoides, 6760
- DNA, Chlorella, 4663
- gelling agent, Eucheuma, 4733
- glucan hydrolases, Euglena gracilis, 4741
- glucanohydrolase, crystalline style, Spisula sachalinensis, 8682
- mannosidase, Patella vulgata, 6124
- monogalactosyl diglyceride, Chlorella vulgaris, 8350
- muscle fibres, frog, 8794
- nucleic acids, Paralichthys, Katsuwonus, 6574
- pesticides, lake waters, 6657
- purification of haemolysin of Chironex fleckeri, 5865
- silvex, Pisces, 6648
- toxin, Microcystis aeruginosa, 4613
- toxins, Prymnesium, 3222, 4629
- trypsin-like proteases, Dermasterias imbricata, 8713

Chemical limnology,

- Broek de Overmere, 3737
- Myriophyllum, Sweden, 5814
- pigment diversity in sediments, 5628
- Vitberger Pond, 3738

Chemical oceanography, 5556, 5611

- Bering Sea, 5519
- biosynthesis by microflora, 4749
- Cananéia, 6646
- carbohydrates in bottom sediments of Kuril-Kamchatka Trench, 5555
- distribution of suspended material, Atlantic Ocean, 6642
- Gulf of California, 9075
- Mediterranean, 3747
- microbial activities in sediments, 5774
- nitrate and meridian circulation, Pacific Ocean, 5554
- persistence of vitamins in seawater, 5553
- primary productivity along meridian 170°E, 5520
- Seas of Hiuchi and Bingo, 7443
- South Atlantic, 5552
- sulphur and carbon turnover, meromictic lakes, 5521
- sulphur, Black Sea, 5564
- suspended matter, Baltic Sea, 5562
- suspended organic matter, Arabian Sea, 5558
- White Sea basin, 6609

Chemical structure,

- crystalline components, sea urchin fertilization

membrane, 6182

nupharolidine, Argol, 6826

substituted naphthoquinones algicide, 5624

Chemistry, 6717

- analytical, 6716
- antimicrobial agent, 6720
- chemical ecology, Myriophyllum spp, 5814
- enzymes, Blepharisma, Spirostomum, 5832
- halogens, polarographic determination from algae, 5623
- hyalin, sea urchin eggs, 6173
- hydrochemistry, White Sea basin, 6609
- nutrient, of plankton in Bermuda, 471
- occurrence of aromatic hydrocarbons in coastal water, hygiene effects, 8251
- stereochemistry, luciferin, Latia, 6113

Chemoreception, 7012

- Elminius modestus, 4019
- Homarus gammarus, 7774
- in teleost lateral-line systems, 812
- turning behaviour, Tubularia spermatozoa, 6897

Chemosynthesis, 7489

- Chemotaxis, fertilization-induced, in zygotes of Allomyces, 1124

Cherax sp., new commensal, 4093

Chiasmolithus damaruensis, 7423

Chile,

- Concepcion Bay, diatoms, 3807
- Copepoda, 4002
- Holothuroidea, 751
- Ophiruroidea, 278
- Phacophyta, determination of free amino acids, 3259
- subantarctic fish, 886

Chilodonella cucullulus, cortical organelles and intracolonial dimorphism, 5833, 5834

Chilodonella cyprini, 4366

Chiloguembelina, 5839

Chilomonas insignis, 7425

Chilomyxterus schoepfi, 7269

Chiloscyllium greshium, cytology of blood cells, 351

Chimaera monstrosa, gastrointestinal hormones, 4294

Chimaera novaezelandiae, 8051

China,

- Bagridae, 394
- Pinnularia kolbeiana sp.n, 536

Chione, 7877

Chione cancellata, larval development, 6134

Chione stutchburyi, growth, 7875

Chionoecetes, hybrids, Japan, 4918

Chionoecetes japonicus, efficiency of toyama kago trap, 1907

Chionoecetes opilio,

- fisheries biology, 1239
- fishery in the Japan Sea, 1240
- larval history, Japan Sea, 6968
- population estimates, Japan Sea, 6967
- starch gel electrophoresis of haemocyanin, 1244

Chionoecetes tanneri, 7753

Chiridota, 7440

Chiridota nigra, Stewart Island, 4527

Chiridota peloria, distribution, Brazil, 6172

Chirocentridae, hypobranchial apparatus anatomy, 6395

Chirocephalus diaphanus,

- effect of temperature on growth, longevity and egg production, 666
- histochemistry of neurosecretory system, 8541

Chironex fleckeri,

- chromatographic properties of haemolysin, 5865
- effects of toxins on pig heart, 8467

Chironex fleckeri, contd.

- haemolytic properties of tentacle extracts, 4837
- toxins, 8468
- Chironomidae**, 3729, 3736, 5306
 - benthos, Ontario, 7819
 - Danube, Hungary, 2707
 - distribution, Nearctic, 3423
 - ecology, United States, 3432
 - ecology, Yugoslav Danube, 3422
 - Krenopsectra fallax* gen. et sp.n., Alps and Pyrenees, 1958
 - Lake Chad, 3427
 - Lake George, Uganda, 3725
 - larvae, water level effect, Lake Kariba, 4100
 - regeneration, 3727
 - seasonal abundance and emergence, Arkansas, 8611
- Chironomus**, 3422, 5530, 6625, 9069
- Chironomus lindneri**, water level effect, Lake Kariba, 4100
- Chironomus salinarius**, larval growth, 1951
- Chironomus strenzkei**, respiration in life history, 4986
- Chirostylidae**, East China Sea, 8559
- Chiroteuthis**, 7897
- Chitinopoma occidentalis**, 3314
- Chitinozoa**, Devonian species, Missouri, 5828
- Chitonida**,
 - abnormal, California and British Columbia, 2819
 - chromosome constitution, Japan, 6162
 - Formosa, 7105
- Chlamydia**, antibodies in Antarctic penguins and seals, 786
- Chlamydobacteria**, 9058
- Chlamydotryps**, morphology, physiology and ecology, 1041
- Chlamydotryps stellata**,
 - changes in chlorophyll during growth, 8331
 - changes in chloroplast structure and physiological activity, 561
- Chlamydomonas**, 3726
 - actions on concanavalin A on mating reaction, 8332
 - carbon dioxide burst, 4654
 - chemical composition, cell wall, 3253
 - development and differentiation of lobate chloroplast, 3822
 - effects of hypoxia on recovery, 8337
 - genetic functions, chloroplast, 3232
 - genetic map of non-Mendelian genes, 5704
 - hydrogen evolution, 4647
 - immuno-electrophoretic studies, 4646
 - immunological relationships amongst strains, 3231
 - induction of gene mutation, 3230
 - sensitivity to metabolites, 4648
- Chlamydomonas archibaldii** sp.n., 8338
- Chlamydomonas braunii**, 5800
- Chlamydomonas geitleri** sp.n., development, reproduction, 8333
- Chlamydomonas geitleri** str. Ettl., 3822
- Chlamydomonas moewusii**, hydrogen evolution, 4649
- Chlamydomonas mundana**, regulation of glycolate oxidoreductase with photosynthetic capacity, 7506
- Chlamydomonas nivalis**, red snow, Greenland, 5698
- Chlamydomonas reinhardi**,
 - chloroplast division and pyrenoid formation, 4650
 - closely linked flagellar genes, 1772
 - CO₂ fixation and enzyme synthesis, 5699
 - effect of methyl glyoxal on growth and cell divisions, 1043
 - effect of peroxyacetyl nitrate, 7510
 - electron carriers, 4653
 - electron transport chain, 4652
 - extranuclear genes, 7507, 7508, 7509
 - feeding to white rat, 8336
 - inhibition of growth by peroxyacetyl nitrate, 7510
 - kinetic behaviour of electron paramagnetic resonance signal, 4651
 - mutant, synthesis of chloroplast membranes, lipids, pigments, 5700
 - mutation, chloroplast membrane biosynthesis, 5701
 - phosphoenolpyruvate carboxylase, 8334
 - photoinhibition of growth in a yellow and a colourless form, 558
 - photosynthetic properties of a mutant devoid of chloroplast membrane stacking, 563
 - pigments in induced mutations, 5703
 - regulation of arginine biosynthesis, 559
 - specific regulatory mechanism of arginine biosynthesis, 560
 - study of flagellar apparatus, 36
 - suppression of extranuclear streptomycin dependence, 8335
 - survival of haploid and diploid forms irradiated with different LET, 1042
 - ultrastructure of chloroplasts, in mutants lacking photosynthetic components, 562
 - uniparental inheritance, 37
- Chlamydomonas surtseyi** sp.n., 8338
- Chlamydoselachus anguineus**, 5164
- Chlamydotheca**, 4975
- Chlamys hercicus**, proteolytic enzymes, 7077
- Chlamys islandica**, reproduction, 5016
- Chlamys radiata**, Stewart Island, 4527
- Chlamys swifti**, 7618
- Chlamys textoria**, 5015
- Chlorella**, 5504, 5716
 - accumulation of zinc, 8344
 - adaptation to temperature changes, 8348
 - biosynthesis, 3826
 - biosynthesis of δ -aminolaevulinic acid, 8341
 - blue light-enhanced respiration, 3233
 - carbohydrate changes during culture, 4655
 - carbohydrate turnover influenced by blue and red light, 552
 - carbon dioxide burst, 4654
 - contributor to food supply of man, 38
 - culture, 5705
 - effect of dichlorophenoxyacetic acid, ultrastructure, 4662
 - effect of high carbon dioxide content on autospore release and number, 8343
 - effect of light on nitrate and nitrite assimilation, 1046
 - effect of microflora on organic accumulation in culture, 5715
 - effect of nitrogen source on dehydrogenases, 4657, 7514
 - effect of oxygen on carbon dioxide fixation, 4658
 - effect of total illumination on production, 2505
 - enzymatic regulation of DNA synthesis, 7511
 - enzymes, photosynthesis, 7518
 - fatty acids, environment induced changes, 4659
 - fermentation of glucose, 7512
 - ferredoxin electron spin resonance, 6754
 - flocculation and deflocculation of aqueous suspension, 8339
 - hydrogen evolution, 4647
 - influence of arsenate on phosphate absorption, 4656
 - inhibition of mitosis by copper, 6755
 - interrelations with yeast under joint cultivation, 1047

Chlorella, contd.

- kinetics of NAD during dark-light transients. 5709
- light intensity, effects on oxygen production. 3234
- manufacture of beverages containing lactic acid bacilli. 4665
- mechanism of nitrate reduction. 5714
- methylglucose uptake, light-driven. 5713
- mutagenic action of ethyleneimine. 5717
- mutation process. 4689
- outdoor cultivation, Třeboň. 4690
- predicting light effects on growth and P uptake. 2507
- preillumination effects, light of different wavelengths. 8340
- production of reticuloendothelial system stimulant. 5706
- regulation of CO₂-fixation by light. 6758
- ribulose 1,5-diphosphate carboxylase. 1775
- sterols, containing ergosterol. 1773
- surface properties and ion exchange. 8367
- taxonomy of strains. 8342
- taxonomy, utilization of organic nitrogen compound. 3235
- temperature dependence of energy transfer efficiency. 8349
- temperature-induced morphological variability. 3242
- thermal adaptation of photosynthesis. 1048
- thickness of culture solutions, effects on oxygen production. 3234
- use in toxin research. 5707
- Chlorella fusca**,
 - photochemical O₂ evolution in glucose. 553
 - time courses of synchronized populations. 4687
- Chlorella kessleri**, influence of light on autospore number. 1055
- Chlorella protothecoides**,
 - acetate metabolism. 6757
 - chlorophyllase. 6760
 - glucose metabolism. 6756
- Chlorella pyrenoidosa**,
 - adaptation in pigment composition and photosynthesis to infrared. 1062
 - adaptation to growth-limiting substrates. 6761
 - cation requirements. 2509
 - complexity of fluorescence. 555
 - DNA. 4663
 - DNA-associated RNA. 554
 - effect of copper on photosynthesis. 1044
 - effect of hydroxymethanesulphonate on photosynthesis. 3824
 - effect of nitrate and ammonium nitrogen on nitrate reductase and dehydrogenases. 556
 - fluorescence and oxygen evolution. 4661
 - glutamate dehydrogenase. 557
 - glutamic acid decarboxylation. 8347
 - glycolate pathway. 7517
 - influence of copper concentrations. 8346
 - oxygen production, thermal reaction. 4660
 - photometric analysis, pigments. 5710
 - photophosphorylation inhibitors. 6762
 - photosynthesis. 5712
 - regulation of photosynthesis carbon. 6759
 - trapping of dieldrin lost from culture. 5708
- Chlorella sorokiniana**,
 - effect of helium on growth. 3823
 - numerical taxonomy. 3298
- Chlorella vulgaris**,
 - Adansonian classification of strs by computer. 2506
 - effects of dipyrldyl diquat on metabolism. 6763
 - growth of synchronous cultures. 3825

- isolation of loroxanthin. 574
- metabolism, dipyrldyl diquat effect on gas exchange. 4664
- metabolism of L- and D-amino acids. 2502
- monogalactosyl diglyceride distribution and metabolism. 8351
- photosynthetic transients. 1049
- respiratory response to fluoride and copper ions. 1061
- role of sulphur-containing polynucleotide-peptide complex in cell division. 6764
- separation, monogalactosyl diglyceride. 8350
- Chlorellae**, symbionts, *Plactopten magellanicus*. 4729
- Chlorida pelamidae sp.n.**, Gulf of Tonkin. 3382
- Chlorine**. 3874
 - action of CO₂ on light-dependent Cl⁻ uptake in *Elodea*. 79
 - Chara corallina*. 4644
 - disinfection of waste water. 1706
 - effect on bacteria in water supplies. 1700
 - regulation in *Lycastis indica*. 3960
 - tolerance, of *Ischnura elegans*. 712
 - uptake, and O₂ consumption in *Paratelphusa hydrodomous*. 2702
 - uptake in *Calyptocephalella* skin. 2072
 - use in inhibition of fouling organisms. 6707
- Chlorobacteriaceae**. 5786
- Chlorobium**. 5784
- Chlorobium thiosulfatophilum**, effect of UV-light. 4756
- Chlorocladus**. 3828
- Chlorococcum echinozygotum**, growth inhibition by xylulose. 4666
- Chlorodesmis**, additions to genus. 1777
- Chlorogloea fritschii**,
 - effects of light intensity of ultrastructure, high temperature. 8303
 - function of tryptamine. 13
- Chlorogonium**. 5718
 - sexual reproduction. 5757
- Chlorohydra hadleyi**, effect of light on asexual reproduction. 638
- Chlorohydra viridissima**, effect of light on asexual reproduction. 638
- Chloronia antillensis sp.n.**, Dominica. 8612
- Chlorophthalmus albatrossis**, fishery biology. 455
- Chlorophyceae**. 3192, 3710, 3738, 3739, 3817, 4579, 4580, 4581, 4586, 4590, 5617, 5618, 6599, 7428, 7434, 7487
 - accumulation of organic acids. 3250
 - biomass production in culture. 8369
 - carotenoid pigments. 4634
 - Charophyceae from Touraine and Anjou, revision. 3818
 - cytology. 7499
 - desmids, Japanese. 537
 - desmids, Kashmir. 538
 - effects of UV-radiation on photosynthesis. 4684
 - estimation of numbers in natural populations. 4636
 - flavonoids. 566
 - glucokinase activity. 6749
 - morphology and ecology, Pakistan. 8326
 - periodicity, India. 6742
 - pigment patterns, xanthophyll. 5697
 - production physiology, photosynthesis. 4632
 - storage effects. 3252
 - Struveopsis gen.n. 575
 - survival. 3251
 - Vietnam. 27

Chlorophyll,

- Acetabularia mediterranea*, biosynthesis, 1770
- chlorophyll *a*, Greenland waters, 1657
- continuous measurement of, in dinoflagellates, 66
- optimal extraction conditions from phytoplankton cultures, 477

Chlorophyll maximum, northeast Pacific, 2352

Chlorophyllase,

- Chlorella protothecoides*, 6760
- phytoplankton, 8223

Chlorophytum arundinaceum, karyotypes, 2510

Chlorophytum elatum var. variegatum, karyotypes, 2510

Chlorophytum tuberosum, karyotypes, 2510

Chloroplasts, 3821, 3822

- Acetabularia mediterranea*, photosynthesis and respiration, 547
- Chlamydomonas stellata*, 561
- development and differentiation, 3822
- development, as effected by actinomycin D in *Euglena*, 1090
- effect of antibiotics on development in *Euglena*, 1076
- effect of streptomycins, 3845
- Mesodinium rubrum*, 1142
- movement, of *Mougeotia* in blue light, 2517
- multiplication, *Acetabularia*, 5689
- quasi-crystalline lamella lattice, *Zygnema*, 5732
- ultrastructure, *Chlamydomonas* mutants devoid of chloroplast membrane stacking, 563
- ultrastructure, *Chlamydomonas* mutants devoid of photosynthetic components, 562

Chloropseudomonas, 5784

- evolution and utilization of molecular hydrogen, 6811

Chlorosarcina, detoxication of simazin, 3827

Chlorotocus, 5222

Chlorotocus crassicornis, first larval stage, 182

Chlorpromide, effect on toad bladder, 2870

Choanophrya, structure of peduncle, 3901

Cholera fagnezi, 8614

Cholesterol, water solubilization, *Euglena gracilis*, 5759

Cholinesterase,

- axial mesoderm, *Triturus cristatus*, 7197
- Doridae*, 7027
- effect of inhibitors on squid giant axon, 267

Chologaster agassizi, feeding, 3041

Chondracanthidae, taxonomy, 5966, 5967

Chondracanthus narium sp.n., British Colombia, 3996

Chondria, ultrastructure, iridescent bodies, 3268

Chondrichthyes,

- microchromosomes, 6363
- teeth development, 8878

Chondrostoma nasus, 8934

- host to *Tracheliastes chondrostomi*, 168

Chondrus, 6714

Chondrymenia lobata, new to France, 60

Chorda filum, influence of reduced salinity on distribution, 1065

Chordaria, 6781

Chordaria flagelliformis, reproduction and survival, 2529

Chordata, 8241

Choricotyle oregonensis sp.n., parasite of *Antimora rostrata*, 5888

Chorionase, activity assay, *Oryzias latipes*, 7409

Chorology, mid-European Utricularia, 1134

Choromytilus meridionalis, 6145

Choroterpes nigrescens, 8608

Chromaspirina inglii sp.n. 5921

Chromatic behaviour,

Acmaea digitalis, 7028

Caranx hippos, 6493

Chlamydomonas geitleri sp.n. 8333

colour change in fish, 5224

colour patterns, *Stenella graffmani*, 6317

comparative physiology, invertebrates, 8428

diurnal rhythm, *Hippolyte varians*, 8581

dual control, *Palaemonetes vulgaris*, 8591

inhibitors, melanophores, *Rana pipiens*, *Anolis carolinensis*, 8773

laser studies, 7369

Macropodus opercularis, 3665

melanism, *Acanthopterygii*, 6486

melanophore responses, *Pterophyllum eimekei*, 8998

Octopus vulgaris, 6160

Oryzias latipes, 6572

photoperiodicity, xanthophores, *Oryzias latipes*, 5459

pigment mutants, *Anacystis*, 3210

prolactin control, *Gillichthys mirabilis*, 6498

Rana pipiens, 7988

retinal stimulation, *Solea solea*, 6587

temperature effects, *Ocypode macrocera*, 4945

Uca pugnator, 6052

Uca pugnator, *Carcinus maenas*, indole-alkylamine effects, 6053

Chromatium, 5784

Chromatium vinosum, 6805

Chromatographic analysis,

acid soluble nucleotides, fish, 8886

acid soluble nucleotides, mantle, *Haliotis discus*, 6139

algal toxins, 8330

alkaline phosphatase, *Rana esculenta*, 7168

amino acids in nervous tissue, *Bufo regularis*, 7155

amino acids, Phaeophyta, Chile, 3259

aminoacyl tRNA synthetase, *Paracentrotus lividus*, 7121

amylase polymorphism, *Asellus aquaticus*, 5991

androgens, *Rana pipiens*, 7171

aortic acid mucopolysaccharides chromatographic analysis, 8877

blood proteins, *Scomber scombrus*, 6519

brain proteins, *Carassius auratus*, 7302

cardioactive agent, bivalve, 3465

carnosines, 7237

carotenoids, *Aurelia aurita*, 5861

carotenoids, *Psolus fabrichii*, 8721

carotenoids, *Spirulina*, 3208

carotenoproteins, Decapoda, 7752

chlortetracycline in fish, 6324

Cyathura, *Lirceus*, 3369

dehydrogenases, *Polychaeta*, 8521

dimethylamine, trimethylamine, *Gadus* spp. 8971

effects of radiation on fish lipids, 6520

eggs, *Salmo gairdneri*, 6430

electropherograms, *Auxis* spp. 6492

enzymes, *Clupea harengus*, Norway, 6385

enzymes, *Paramecium aurelia*, 7640

esterase polymorphism, *Katsuwonus pelamis*, 9013

fatty acid amides, visceral lipid, fin whale, 6316

fatty acids, Copepoda, 6939

fatty acids, *Eubalaena glacialis*, 8846

fatty acids, *Halosphaera viridis*, 7559

fatty acids, Teleostei, 5442

flowers, *Nymphoides indica*, 4790

formaldehyde, tissues, 6705

Chromatographic analysis, contd.

gastric hyaluronidase, *Scomber japonicus*, 7371
 genetic similarity, 5606
 glycolipids, invertebrates, 7617
 haemocyanin, Decapoda, 7737
 haemocyanin, *Pila leopoldvillensis*, 8665
 haemocyanin, *Todarodes pacificus*, 8698
 haemoglobins, *Anguilla* spp., 8198
 haemoglobins, freshwater fish, 6441
 haemolysin from *Chironex fleckeri*, 5865
 hatching enzyme, *Oryzias latipes*, 6571
 heterogeneity of G6PD, vertebrates, 5610
 hexaene hydrocarbon, *Skeletonema costatum*, 8322
 histones, toads, 6220
 insecticides from water, 8249
 lipid determination in fish meal, 6342
 lipids, *Euphausia*, *Pleuroncodes*, 5514
 lipids, mitochondria, *Carassius auratus*, 7301
 lipids, shark, 6365
 liver oils, shark, Japan, 8071
 marine lipids in relation to role as hydrostatic agents, 8438
 melanocyte-stimulating hormone, *Squalus acanthias*, 8074
 melatonin, pineal organ, *Oncorhynchus tshawytscha*, 8885
 muscle, myogens of penaeid, 6039
 muscle proteins, octopus, 3483
 nonheme iron proteins, *Leucaena glauca*, 5729
 nucleic acids, *Xenopus laevis*, 6278
 paleae, *Pectinaria koreini*, 8536
 peritrophic membrane, *Neomphritrite figulus*, 8531
 phospholipase D, *Porphyridium cruentum*, 6792
 phospholipids, frog myelin, brain and spinal cord, 7965
 pigments, algae in culture and sea water, 6730
 pigments and blood serum, *Rana pipiens*, 8775
 pigments, Chlorophyta, 4634
 pigments, *Dunaliella*, 5721
 pigments, *Palaemonetes vulgaris*, 8591
 pigments, *Rhithropanopeus harrisi*, Gdansk, 8603
 pituitary extracts, Pisces, 6478
 pituitary extracts, *Raia rhina*, 6367
 polysaccharides, invertebrates, Japan Sea, 7618
 polysaccharides, Phaeophyta, 6781
 preoptic recess organ, vertebrates, 5615
 proteins, eye, *Thunnus* spp., 5426
 proteins, lenses, vertebrates, 7169
 protein sequence in, *Cyprinus*, *Gadus*, *Tilapia*, 8961
 proteins, Teleostei, 7361
 proteins, *Thunnus alalunga*, 8868
 pyruvate kinase, *Rana pipiens*, 6262
 quinaldine residue in fish, 6344
 seasonal changes, fatty acid composition, Copepoda, 6939
 serum and haemolymph proteins, 8945
 serum, *Macropipus puber*, 6975
 serum proteins, *Macropipus puber* male during moulting cycle, 7782
 silver, Pisces, 6648
 sphinga-4,8-dienine, glycolipid, oyster, 8671
 spingosine, *Procambarus clarkii*, 7803
 steroids, *Mugil capito* ovaries, 6570
 sterols, *Monochrysis lutheri*, 6743
 taxonomy, Pisces, 6325, 6326
 toxins, 8856
 transferrins, *Salvelinus fontinalis*, 8113
 tropomyosin, *Gadus*, 5385
 unsaturated wax esters, alcohols, roe, *Trichogaster*,

Mugil, 7375

visual pigments, *Libinia marginata*, 4940

Chromatophores,

activity of radial nerve extracts, *Asterias amurensis*, 5043

Centrostephanus, reaction to light, 753

comparative physiology, Mollusca, vertebrates, 8428

frog skin, 2089

response to nerve stimulation and drugs in *Loligo*, 268

Chromobacterium, lipopolysaccharide production, antibacterial agent, 5788

Chromosomes,

Amphibia, 6227

and enzymic patterns, of sticklebacks, 2321

Anodonta anatina and *Unio pictorum*, 243

Aplysilla rosea, 5857

Baetis spp., 4982

blood culture method, Pisces, 8852

Boodlea, *Chamaedoris*, 8329

Botryllus schlosseri, 2043

Bufo, 6254

Bulinus sericinus, Ethiopia, 8653

chromatin association with DNA polymerase, embryos, sea urchin, 7128

chromosomal factor exerting effect on morphogenesis, *Ulva mutabilis*, 6776

Cobitidae, Japan, 3633

constrictions, *Xenopus laevis*, 6290

Crocodylia, 8008

Cyprinidae, 3642

deep-sea fishes, 5227

DNA content, Amphibia, 6227

Euplotes, 6852

Fundulus, 6559

Halichoerus grypus, 6305

heterogamety, Teleostei, 8078

hybrid swarms, *Fundulus* spp., 8206

induction of gene mutation, *Chlamydomonas*, 3230

karyoecology, Simuliidae, 7832

mapping, *Rana pipiens*, 7984

microchromosomes, Pisces, 6363

mitotic, *Petromyzon marinus*, 6361

Molara, *Capraia*, 4850

Nitella acuminata, 4675

Notemigonus and *Notropis*, 879

number, *Artemia salina*, Great Salt Lake, 2624

number, *Crenobia alpina* Dana, 1858

number, *Draparnaldia*, 1778

number, *Labyrinthula* sp., 1834

Podocnemis, 6299

Podocnemis, Brazil, 6297

Poecilia, 4472

polarized movement of lateral loops, lampbrush chromosomes, newt, 5128

polyploidy, *Stichococcus*, 6774

polytene, destruction in *Stylonchya mytilus*, 1841

Porphyra tenera, 3274

preparation, ovaries of *Fundulus*, 5447

Rana pipiens, 5114

Rana ridibunda, 7991

speciation, *Salmo salar*, North Atlantic, 7289

Stylonchya notophora, 4819

Trypetesa lampas, 5985

Xenopus laevis, 6290

Xiphophorus maculatus, British Honduras, 6590

Chromulina verrucosa, 6597

- Chroomonas*. 5756
ultrastructure. 4743
- Chroomonas mesostigmatica*, ultrastructure. 1793
- Chroomonas salina*. 8222
- Chrosomus eos*. 3642
morphology and variation. 867
- Chrosomus erythrogaster*,
diet. 2996
morphology and variation. 867
- Chrosomus neogaeus*. 3642
- Chrysaora quinquecirrha*,
amino acid content of nematocysts. 5866
chemical composition of nematocytes. 634
distribution, York River, Va. 118
effect of toxin on rat cardiovascular system. 633
sting. 116
study on nematocytes. 3919
tentacle ultrastructure. 4838
- Chrysemys picta*. 8011
parasitism by *Spirorchis*. 5919
- Chrysemys picta belli*, telencephalon. 8014
- Chrysemys picta marginata*, occurrence of trypanosomes. 1149
- Chrysochromulina*. 4633
vitamin requirement. 4621
- Chrysochromulina parva*. 6597
- Chrysomonadina*, ichthyotoxins. 3220
- Chrysophaerella multispina*, Lake Straken, Sweden. 8312
- Chrysophrys major*. 5453, 6526
fatty acid amide. 8987
- Chrysophyceae*. 3192, 3804, 4581, 5497, 6599, 7428, 7434, 7488, 9058
accumulation of mercury. 3214
Alaska. 2497
Amatola Mountains, Africa. 533
auxospore formation in pennate diatoms. 542
culture. 2498, 8310
demonstration of a locomotor substance. 1034
diatom population maintained in a dialysing enclosed space. 535
distribution, Southeast Asia. 7495
effect of pH changes. 539
effect of temperature and manganese. 2479
electron microscopy, diatoms. 8308
Indo-China. 7493
intracellular origin of flagellar hairs. 8284
meromictic lake in Finland. 1038
Minnesota. 3802
new and rare spp from S. Africa. 534
new Siberian and Chinese freshwater spp. 536
pigments of *Apistonema*. 3805
seasonal variations, silicoflagellates, Aegean Sea. 8314
short-term variations of surface diatoms, Kuroshio, Japan. 8309
S. India. 22
structure, physiology, biochemistry. 5642, 6740
swamp, Ardenne. 7494
Sweden. 8312
ultrastructure, New Zealand. 8317
- Cithamalus*. 3314, 4900
- Cithamalus antennatus*, embryology. 173
- Cithamalus stellatus*, oxygen consumption and effect of temperature. 1892
- Chydorus*. 6937
- Chydorus tilholi* sp. n., Chad. 8539
- Chytridiaceae*, parasite of *Juncus pelocarpus*. 3305
- Chytridiomycetes*, Douglas lake. 5801
- Chytridiomycetes*, parasitism of algae. 5800
- Chytridium*. 7583
- Chytridium lagenula*. 5800
- Cichlasoma bimaculatum*, catabolic pathway for glucose. 8986
- Cichlasoma facetum*. 8860
- Cichlidae*,
chemoreception in lateral-line systems. 812
myodome. 428
relation between thyroid activity and O₂ consumption. 885
- Cidaris*. 7108
- Cidaroidea*, distribution, Gulf of Mexico. 4175
- Cilia*,
Balanus balanoides. 8550
calcification of tegument in Coleps. 96
central fibril orientation, *Opalina*. 7638
cloaca and hind gut, *Xenopus laevis*. 8004
coordination, *Paramecium*. 5847
infraciliature organizations. 5833, 5834
inhibition of motility by plasma from cystic fibrosis patients. 6138
inhibition of regeneration by IPC in *Stentor*. 626
inhibitor, cystic fibrosis. 5014
location of arginine kinase, *Tetrahymena pyriformis*. 6862
microcinematography. 6699
movement, *Mytilus edulis*. 7086
orientation, *Euplotes*. 1833
orientation, *Paramecium caudatum*. 1840
Paraturbanella. 3953
regeneration, in *Tetrahymena* and inhibition by colchicine. 1161
staining, *Paramecium*. 7643
ultrastructure, flagellar roots, *Oedogonium*. 3240
ultrastructure, *Turaniella vitrea*. 8458
- Ciliata*,
benthic, Lake Orta. 2568
cultivation of marine species. 5853
freshwater fishes, parasites. 8440
indicator species. 5826
left and right spiralling. 7628
littoral, White Sea. 7627
morphology of psammophilic species, Caspian Sea. 86
of a eutrophic pond. 2567
origin of primordial buccal cavity in hypotrich. 3888
parasites from fish, Lake Seliger. 106
psammobiotic species, Japan Sea. 87
reactions of silverline system to mechanical damage. 6832
temperature tolerance. 6831
zoogeography of psammophilous species, Caspian Sea. 6830
- Cinclus mexicanus*,
physiological adaptations to diving. 8819
responses to temperature. 8820
- Ciona intestinalis*. 3875, 5060, 7138
mucopolysaccharides in tests. 7941
spermatogenesis and spermiogenesis. 6200
- Ciona robusta*, circulatory system development. 4207
- Circeaster*. 6177
- Circular dichroism*, frog rod outer segments suspensions
Rana temporaria. 5119
- Circulatory system**,
Balanus balanoides. 8550
blood flow through afferent branchial arteries, *Raja rhina*. 7258
cardio-vascular, *Hypogeophis rostratus*. 2854

Circulatory system, contd.

- Chaenichthys rugosus*, 5391
Clarias batrachus, 7309
 development, *Ciona robusta*, 4207
 development of venous system in *Polypterus senegalensis*, 468
saccus vasculosus of *Salmo gairdneri*, 391
 venous return in trunk of *Heterodontus portusjacksoni*, 354
 water flow through gills, *Heterodontus portusjacksoni*, 7256
- Cirrolanidae*, distribution, Gulf of Marseilles, 4037
Cirrattulus cirratus, sub-lethal effects of oil, 9102
Cirrhigaleus, 4270
Cirrhina mrigala, 6450, 6471
 distribution of neuromast, 72-hour stage, 7308
 seasonal variations of calcium and phosphorus in juveniles, 4361
Cirrhinus, 6371
Cirriformia spirabrancha, N₂ waste products and excretory enzymes, 652
Cirriformia tentaculata, sub-lethal effects of oil, 9102
Cirripedia,
 biometrics, 1893
 distribution, Gulf of Oman and Iranian Gulf, 4015
 embryology, 173
 lab culture of larvae, 5983
 new records of intertidal spp, India, 174
 response to salinity, 2639
 shell-burrowing, 2635
 sperm ultrastructure, 7735
Cirsomphalus, taxonomy, 7036
Citharichthys spp.n., Western Atlantic, 7388
Citharichthys amblybregmatus sp.n., 7388
Citharichthys gymmorhinus sp.n., 7388
Citharinus distichoides, 7692
Cladonia exusta, redescription, 3920
Cladocera, 3735, 7434, 7437
 distribution, Chad, 8539
 ecology, Recent and fossil, Denmark, 5949
 embryology, Lake Chad, 8540
 Limburg, Belgium, 665
 oligomerisation, 2626
 phototaxis, 1211
 productivity, Kiev reservoir, 3982
Cladophora, 4584, 5523, 8328
 ultrastructure, 8352
Cladophora catenata, taxonomy, 2514
Cladophora glomerata, 7501
 bacterized culture, 2512
 Great Lakes, 2511
Cladophora jongiorum sp.n., Caribbean, 2513
Cladophora longicollata sp.n., Caribbean, 2513
Cladophora sericea, 8277
Cladopyxis, 5489
 Clams,
 fresh water, manganese, 2021
 hepatitis associated with, 2810
 Clam beds, benthic fauna, Hachinohe coast, Japan, 497
Clarias, aquaculture, Thailand, 3629
Clarias albopunctatus, distribution, Chad, 8134
Clarias batrachus, 3742
 circulatory system anatomy, 7309
 effects of reserpine on pituitary gland, 5329
Clarias gariepinus, 3636
Clarias lazera,
 morphology of pineal organ, 7310
 sinus glands, 8136
Claribulla, 4851
- Classification, 5601
 avoiding distortion, automatic grouping programs, 3178
 constrained data, 2442
 flexibacteria, 1103
 littoral environments, East Murman, 6639
 numerical taxonomy, 5602
 nutritional, limnic bacteria, 1813
 recurrent group analysis in classification of flexibacteria, 1102
 Ziphyiini, 6318
Clathrina, 6631
Clathrina coriacea, 6882
Clausocalanus, revised, 154
Clausophyes massiliana sp.n., from Mediterranean, 3921
Clava multicornis, development of polyps, 635
Clavelina, 6631
Clavelina nana, English Channel, 6197
Clemmys caspica, leptospiral agglutinating factors in serum, 8809
Clesthobothrium, 7684
Clibanarius longitarsis, cytoplasmic inclusions in spermatozoa, 1242
Clibanarius misanthropus, carotenoids, 1241
Clibanarius vittatus, effect of shell size and weight on agonistic behaviour, 6010
Climacograptus bicornis, modified basal assemblage, 1853
 Climatology, Panama Bight, 5171
 Clinical extraction, chymotrypsins, *Pseudemys elegans*.
Clinidae, distribution, South Africa, 8162
Clinocottus analis,
 feeding behaviour, 7353
 temperature sensitivity, 4404
Clinopegma borealis sp.n., Kamtchatka Peninsula, 1980
Clinostomum, parasite of fish-eating birds, Colombia, 6300
Clinostomum giganticum, taxonomy, 8495
Clinostomum marginatum, 7339
 parasite of frog and chick, development, 5889
Clinus, 5390
Clio pyramidata, shell morphology, 4116
Cliona, penetration of CaCO₃ substrates, 2577
Cliona viridis, taxonomy of Zooxanthellae, 3322
Clione limacina, structure and function, buccal apparatus, 4117
Clisocolus, 7874
Cloacitrema philippinum sp.n., parasite from *Cerithium ornata*, Philippine Islands, 5890
Clorida fallax, 7746
Closterium, 3817
 ultrastructure of cell walls, 1035
Closterium acerosum, growth patterns and motility, 4695
Closterium littorale, mitosis, cytokinesis, cell elongation, 8353
Clostridium, 3296, 8871
Clostridium botulinum,
 disease in waterfowl, Kern River, 3543
 type E, incidence in dressed whitefish chubs, 1097
Clostridium oceanicum sp.n., spore-forming, marine sediments, South Atlantic, 8413
Clupavus casieri sp.n., Upper Cretaceous of Lower Congo, 2316
Clupea, 5188
 clupeine and DNA, 2965
 ecology, Iceland, 5234
 taxonomy, 5161

- Clupea**, *contd.*
 variability in myomere number, larvae, 7272
- Clupea harengus**, 5233-5254, 7271
 age, length, and gonadal stages, Georges Bank and Gulf of Maine, 362
 behaviour, North Sea, 5262
 biometrics, Gulf of Maine, 363
 buoyancy, 828
 catch to artificial lights, Atlantic, 8905
 distribution, abundance, mortality, Norwegian waters, 5260
 distribution, Atlanto-Scandian, 5258
 effect of elemental phosphorus on L-cells in culture, 5592
 effect of oil pollution, 3779
 esterase polymorphism, 8094
 fecundity, Iceland, 5374
 fish muscle esterases, 824
 fishery, Ireland, 8869
 fishery, North Sea, 6383
 free fatty acids from oil, 361
 immunological blood analysis, 3605
 isopropanol-water azeotrope as solvent in FPC production, 827
 isopropanol-water mixtures for FPC production, 826
 larvae, 819
 noise effects, Baltic seas, 5263
 otoliths, Gulf of St. Lawrence, 825
 'races', North Sea, 2963
 shoaling behaviour, Pacific Ocean, 8904
 sorbitol dehydrogenase, gene duplication, 6386
 sound stimuli behaviour, Baltic Sea, 8903
 sperm DNA, 5264
 strontium and calcium, Sea of Okhotsk, 4305
 water soluble arseno-organic compounds, 814
- Clupea pallasii**, buoyancy, 828
- Clupea sprattus**,
 echo sounding investigations, Norway fjords, 8906
 fishery, British Isles, 7297
 spawning, Baltic Sea, 5256
- Clupeidae**, 8488
- Clupeiformes**,
 keys, 8083
 East African coastal waters, 360
 taxonomy, 8083
- Clupeoidea**, Malaya, 4311
- Clupisoma**, parasitism by Haplochinac, India, 6903
- Clupisoma garua**, 6903
- Clupisudis**, taxonomy, 5269
- Clymenella torquata**,
 effect of temperature, salinity and substrate on distribution, 2607
 temperature tolerance, 3344
- Clypeaster**, 7107
- Clypeasteroidea**, lantern support structures, 6175
- Clypeoniscus**, taxonomy, host-parasite relations, distribution, 687
- Cnemidocarpa peruviana**, 7138
- Cnemidocarpa squamata sp.n.**, Greenland, 7939
- Cnephia ornithophilia**, Maryland, 6072
- Cnidaria**, 8241
- Cobalt 60**, used for measuring feeding rates in *Goniobasis clavaeformis*, 2752
- Cobitis aurata**, distribution, Poland, 4362
- Cobitidae**,
 hybrids, 5313
 karyotype study, 3633
- Cobitis**, 5330
- Cobitis (Sabanejewia) aurata**, River Pilica, Poland, 403
- Cobitis biwae**, 3633
- Cobitis delicata**, 3633
- Cobitis granoei olivai subsp.n.**, Mongolia, 6451
- Cobitis larvata**, distribution, Italy, 7311
- Coccogonophycidae**, 8290
- Coccolithophora**, radioactive contamination of culture, 1761
- Coccolithophoridae**, 3812
- Coccolithus**, 5504
- Coccolithus huxleyi**, 3808
 physiological comparison of cells, 8313
 physiology, photosynthesis, 4617
- Cocconeis**, 5651
 protoheterotrophy, 1762
- Cocconeis placentura**, electron microscopy, 7496
- Cochlostoma**, 7019
- Codium fragile**, new locality in N. Norway, 39
- Codium tomentosum**, 7467
- Coefficient of expansion**, of algae, defined, 2
- Coelastrum strains**, physiology and biochemistry, 5719
- Coelenterata**, 8856
 Anthozoa, sessile populations of the Glenan Archipelago, 3913
 association with cyclopoid copepods, 158
 cnidarian desmocytes, 1845
 effect of irradiation on formative processes, 114
 experimental feeding of medusae, 629
 freshwater jellyfish, California, 119
 Hydroidea, sessile populations of the Glenan Archipelago, 3912
 hydroids in the Black Sea, 1843
 medusae, Arctic Ocean, 4832
 medusae, Japan, 4833
 numerical taxonomy, coral reefs, Hawaii, 8465
 Silurian, Afghanistan, 7665
- Coelobothrium**, 7684
- Coelobothrium monodi sp.n.**, Iran, 7684
- Coelomic fluid**, immunology, sipunculid, 2040
- Coelomomyces macleayae**, parasite of *Aedes polynesiensis*, Fiji, 5802, 6069
- Coelomomyces punctatus**, parasite of *Anopheles quadrimaculatus*, Carolina, 6073
- Coeloplana willeyi**,
Holothuria leucospilota, Japan, 4840
 New Zealand, 1848
- Coenagreon**, 7014
- Coenobial envelope**, ultrastructure in *Scenedesmus dispar*, 1056
- Coenobita**, 7690
- Colacium**, 4508
- Colcemid**, effect of *Tetrahymena pyriformis*, 3899
- Colchicine**, see **Inhibitors**.
- Coleochaete**,
 development, 2523
 Gujarat, India, 564
 stochastic approach to development, 40
- Coleoptera**, 7834
 Ceylon, 8613
 defensive chemistry on land and water, 8615
 geographical distribution in Africa, 2711
 larvae, Ethiopian region, 2714
 Norway, 8614
 study of aquatic spp, 217
- Coleps**, calcification of cilia tegument, 96
- Coliptocephalella**, 8734
- Colisa**, chemical signals and nest-building, 6495
- Colisa lalia**,
 feeding behaviour, 8167
 prey catching by water-spitting, 8187

- Collagen,**
fish, basement lamella. 1641
periodicity in brain sheath of *Armandia brevis*. 3957
presence in proventriculus of Syllidae. 3977
- Collagenase,**
peptide activity, *Rana catesbeiana* tadpoles. 5100
Uca pugnator. 4973
- Collections,**
algae. 3193
Ascidacea, American Museum of Natural history. 7138
Chrysophyceae, Indo China. 3213
Clupeiformes, Steindachner. 8083
Crustacea, Netherlands. 3351
Diamesini. 4985
Lamarck Collection, Museum d'Histoire Naturelle, Geneva. 4126
Madreporaria. 6889
Physetocaris micropthalma. 3376
Pisces. 8069
polychaetes from Pescal II. 3967
Porifera, Tokushima Museum. 7660
type specimens, Pisces, Tulane University. 6320
- Collection of organisms,**
phytoplankton micro-sampler. 6602
vacuum apparatus for collecting nudibranchs. 506
- Collembola,** as food for waders, Svalbard. 2710
- Collichthys.** 6489
- Collotheca brevivilata,** distribution, Bohemia. 4865
- Colobomatus embiotocae sp.n.** 5968
- Cololabis.** 5188, 5222
vitamin A distribution in eye and other organs. 8202
- Cololabis saira,**
aggregations. 2317
bibliography. 8200
fishing industry, California. 8046
spawning populations, Japan Sea. 8199
- Colonization,**
Chrysophyceae, Carolina. 8310
Perna canaliculus, Kouma harbour. 4158
Protozoa, artificial microhabitat. 5825
- Coloration,**
dorsal markings, *Erosaria helvola*. 7861
genetics, *Oryzias latipes*. 5458
Nalbantichthys. 8855
pineal organ control, *Salmo gairdneri*. 8108
pleiotropic effects of golden colour gene, *Salmo gairdneri*. 7287
Rana pipiens. 7988
Stenella graffmani. 6317
- Colorimetry,**
changes in spectrum, *Phaeodactylum tricornutum*, protein structure changes. 8320
copper, sea water. 6645
effect of radiation on fish lipids. 6520
energy transfer efficiency, *Anacystis nidulans*. 8302
energy transfer efficiency, *Chlorella*. 8349
nitrate-reductase activity, *Ankistrodesmus*. 3225
- Colossendeidae,** Ross Sea. 1965
- Colossoma bidens.** 8482
- Colpidium kleini sp.n.,**
atypical division. 6839
taxonomy. 5835
- Colpoda.** 7620
- Columbella,** collection, Geneva. 4126
- Colus gracilis.** 4023
- Colymbetes fuscus,** gene amplification in oocytes. 6077
- Comantenna recurvata.** 6940
- Comesomatidae,** key to Mediterranean species. 3951
- Commensalism,**
Calliactis polypus, *Dardanus gemmatus*, Hawaii. 5862
Calliactis tricolor, Caribbean seas. 5863
Eutima commensalis sp.n., commensal of *Eugymnanthea*, India. 5868
feeding of *Fungiacava eilatensis* in corals. 2792
of fish and jellyfish. 1847
Rynkatorpa pawsoni sp.n., with *Gigantactis macronema*. 6180
sharks, pelagic fish. 5208
- Committees,**
Fisheries Division Investigations, Progress Report-1968. 4567
prolonged stays, man under water. 4566
salty pools and lagoons. 4518
- Community,**
concept, with relation to marine zoology. 495
intertidal sandy-beach, N. Carolina. 494
succession, algal mats and nutrients. 3104
- Community composition,**
Baltic Sea. 5547
benthos, Baltic Sea. 5544
Black Sea at Danube mouth. 4516
echinoderm association, Plymouth, Brittany coast. 7116
Gulf of Taranto. 5551
measure of primary production. 8226
meiobenthos, Bermuda platform. 6628
meroplankton, Oslo fjord. 9050
phytoplankton, White Sea. 8230
scleractinian coral. 4845
south Baikal abyssal zone. 9074
zoocenosis on stems of aquatic plants, Danube Delta. 8423
- Competition,**
bacteria, algae, aquatic weeds. 5523
Calliactis parasitica, *Dardanus arrosor*. 4922
in protozoan communities. 623
Porifera. 7659
within algal community. 4584
- Competitors,**
algae. 8286
Cyprinodontidae, Netherlands Antilles. 7389
growth correlation. 3634
oyster aquaculture, Ostend. 7089
Porifera. 6873
- Compsomyx subdiaphana.** 7440
- Computers,**
Adansonian classification of *Chlorella* str. 2506
simulation of molluscan pigmentation pattern. 3454
simulation of phototactic accumulation, *Euglena*. 7548
simulation of phytoplankton growth near sewage outfall. 6685
simulation of population of planktonic Crustacea. 6603
- Computer program.** 4280
for handling data on shrimp abundance. 3176
- Conasellus.** 8568
- Conchocelis,** ultrastructure of *Porphyra leucosticta*. 4717
- Conchocelis phase,** in *Smithora naiadum*. 67
- Conchoecetes artificiosus,** larval development. 4038
- Conchoecia bispinosa,** redescription. 3419
- Conchoecia haddoni,** redescription, North Atlantic. 3419
- Conchoecia secernenda,** redescription, North Atlantic. 3419

- Concholepas concholepas**, precursors and metabolites of choline esters, 6106
- Conchostraca**, 7207
- Condition factor**, *Tilapia nilotica*, 7373
- Condylostoma magnum**, reversible effects of antimitotic agents on morphogenesis, 5836
- Conferences**, oil pollution, New York, 6692
- Confrina**, 9014
- Conger vulgaris**, 8515
- Congo**,
 Ecnomus spp.n., 3424
 Luanza water course, 3728
- Congo Basin**, *Malapterurus microstoma* sp.n. and *M. electricus*, 3646
- Congourdella rhacophilae** sp.n., 3890
- Conidae**, use of radula in taxonomy, 6107
- Conjugatae**, 3192
- Conopeum**, 8724
- Conopodina**, keys, 6840
- Conservation**, managing aquatic life systems, 3180
- Constantina pulchra**, fossil trilobite, Devonian, Pennsylvania, 7133
- Continental shelf**,
 Ascidia, Gulf of Gascogne, 7938
 benthos ecology, Ivory Coast, 5548
 benthos, Indian Ocean, 5540
 meiobenthos, Bermuda, 6628
 phytobenthos, Italy, 5618
- Contracaecum spiculigerum**, 6518
- Contractile proteins**, isolated from *Tetrahymena*, 628
- Contractile vacuole**, of *Tetrahymena pyriformis*, 1837
- Contractility**, *Spirostomum*, 624
- Control**,
 aquatic weeds using water-soluble azides, 1136
 biological, international organization, 7471
 effect of temperature on snail control, 723
 Eichhornia crassipes, 1137
 insecticide containing insect-pathogenic *Bacillus* for control of aquatic insects, 713
 iron bacteria, 993
 microorganisms using fumaronitrile, 1119
 pesticidal benzimidazole derivatives, 1015
- Conus**, feeding types, 2745
- Conus sugillatus**, distribution, Hawaii, 7855
- Conus varius**, distribution, Western Samoa, 7856
- Convoluta roscoffensis**, symbiosis with *Platymonas*, 2518
- Copelatus ceylonicus** sp.n., Ceylon, 8613
- Copelatus glyphicus**, distribution, introductions, California, 6074
- Copepoda**, 4495, 6605, 6628, 6841, 6846, 6946, 7434, 7437, 7438, 7724, 8439
 aquaculture, 3720, 5958, 5960
 calanoids, Caribbean and Gulf of Mexico, 153
 cave-dwelling harpacticoids, Romania, 160
 cyclopoids associated with antipatharian coelenterates, 158
 development rate of eggs, 2634
 distribution, Black Sea, 3989
 distribution, Chile, 4002
 distribution, northeastern Pacific, 4013
 distribution of mass species in Scotia Sea, 1890
 distribution, Pontellidae, Pacific Ocean, 6948
 eggs, temperature adaptations, 7723
 embryology, Lake Chad, 8540
 feeding behaviour, Pacific, 4892
 Harpacticoida, Bulgaria, 155
 Harpacticoida, Czechoslovakia, 161
 Harpacticoida, Gulf of Marseille, 162
 Harpacticoida, Hokkaido, 1221
 hosts to *Dinema ocelli*, 159
 influence of food organisms on culture, 5959
 new family of fish parasites, 166
 new species, 5968
 new to Belgium, 671
 parasitism by *Astasia fennica*, France, 6838
 parasitism by *Euglenoidina*, 6851
 parasitism by *Nauplicola lituanicus* sp.n., Lithuania, 6856
 phototaxy, 1211
 rare records, western Mediterranean, 4014
 relation between wet formalin weight and body length, 1891
 taxonomy, India, 7724
 taxonomy of planktonic Indian sp., 1223
 temperature tolerance, Chesapeake Bay, 5505
 vertical distribution, Pacific, 4893
- Cophenetic correlation coefficient**, 2441
- Copilla**, eye structure, 1224
- Copper**,
 accumulation, *Crassostrea virginica*, 5017
 bioassay, phytoplankton, 9088
 blood and hepatopancreas, *Crangon vulgaris*, 4040
 colorimetric analysis of sea water, 6645
 distribution in *Nitella* cells, 1053
 effects of copper complexes on *Scenedesmus quadricauda*, 6773
 effects on photosynthesis of *Chlorella pyrenoidosa*, 1044
 influence on growth, *Chlorella pyrenoidosa*, 8346
 inhibition, marine phytoplankton, 4484
 ions applied jointly with fluoride ions to *Chlorella*, 1061
 sulphate as molluscicide, algicide and fungicide, 1741
 toxicity, Chlorophyta, 7501
 toxicity, *Salmo gairdneri*, 7452
 toxicity, *Scenedesmus quadricauda*, 4693
- Coral**,
 commensalism, *Fungiacava eilatensis*, 2792
 pigments and UV-absorbing substance, 115
- Coral reefs**,
 Acanthaster planci, Indo-Pacific, 7914
 assimilation of photosynthetic products of zooxanthellae, 7676
 atrophy in darkness, 4842
 distribution, genera, New Caledonia, 3327
 ecology, Aldabra atoll, 8243
 ecology and morphology, 6888
 formation, zoogeography, Isla Jaltimba, 4524
 Lima excavata, subfossil, Mediterranean, 7083
 numerical taxonomy, Hawaii, 8465
 primary production, Rhodophyta, Marshall Islands, 7534
 primary productivity, Palau, 4498
 Tul ar, morphology and bionomics, 3326
- Corallina**, taxonomic value of reproductive organs, 4710
- Corallina officinalis**, 7468
 western Norway, 581
- Corallium rubrum**, role of tentacle apparatus in feeding behaviour, 5867
- Corbicula africana**, 4512
- Corbicula fluminea sulfurensis**, 6625
- Corbicula manilensis**, distribution, Baja California, 7880

- Corbicula sandai*, crystallization of ferritin from coelomic fluid, 732
- Cordana pauciseptata*, 8267
- Cordulia aenea*, new to Romania, 711
- Cordylophora caspia*, physiological-ecological, Baltic canals, 4839
- Coregonidae*, 4010
- Coregonus*, gas content of swimbladder, 2967
- Coregonus artedii*,
Barrow Lake, Alta, 829
mortalities, Lake Michigan, 6387
- Coregonus clupeaformis*, 7273
activity periods, Lake Heming, 4319
fishery, Minnesota, 7273
parasitism by *Trienophorus crassus*, 7687
- Coregonus lavaretus*, 8084
'bald spot' disease, Loch Lomond, 5265
ecology, Haweswater and Ullswater, 5266
embryology, 6452
enzyme activities, 8107
- Coregonus lavaretus maraena*, myodome, 364
- Coregonus nasus*, age and growth in Mackenzie and Coppermine rivers, 830
- Coregonus zenithicus*, Barrow Lake, Alta, 829
- Coreolopsis translucida*, 7138
- Corers and coring*, 3808
Bay of Biscay, 8240
Pleistocene Foraminifera, 3879
ram corer with pneumatic shutter, 1732
- Corethra*, endocrine control of water-budget, 4987
- Coris frerei*, distribution, Laccadives, 4303
- Coris julis*, secretion, preoptic nucleus, 5392
- Corisella*, 6654
- Corixa*, 8607
- Corixa panzeri*, 3425
- Corixidae*, 3729, 6621, 7002, 7824
associations in artificial aquatic biotopes, 967
larvae, identification, 2722
Netherlands Antilles, 7002
seasonal changes in sex ratio, 1946
- Corollospora*, 6815
- Corophium clarencense*, 7745
- Corophium insidiosum*, 7089
- Corophium volutator*, 8574, 9069
effects of starvation on osmoregulation, 8573
pollution of environment, 7459
- Corsica*,
Brachycoelium salamandrae, 3939
ecology of *Gobius* in brackish water ponds, 3657
- Cortex*,
cortical structure, *Paramecium aurelia*, 1156
Tetrahymena pyriformis, 1162
- Cortisol dynamics*, in gonadectomized ♀ *Oncorhynchus*, 838
- Corvina axillaris*, new genus suggested, 429
- Corvospongilla bohmi*, Cameroon, 4828
- Corvospongilla sodenia sp.n.*, Cameroun, 1842
- Corvospongilla thysi comb.n.*, Cameroun, 1842
- Corydalis cornutus*, 7477
- Corydoras spp.*, taxonomy, Surinam, 7312
- Coryne tubulosa*, structural features of mass aggregation, 4847
- Corynebacterium kusaya*, antibacterial substance, 1811
- Corynosoma hamanni*,
sexual dimorphism, 3949
trunk morphology, 3949
- Coryphaena equiselis*, vertebral numbers and identification, 787
- Coryphaena hippurus*, 7381
vertebral numbers and identification, 787
- Coryphaenoides rupestris*, 5164
- Coryphella fusca*, taxonomy, 7037
- Coryphella verrucosa rufibranchialis*, feeding and taxonomy, 2746
- Corythion f.n.*, Iceland, 3316
- Coscinodiscus*, 3849, 5687, 8229
parasitism by *Lagenisma coscinodisci*, 7587
- Coscinodiscus asteromphalus*, 5672
- Coscinosira polychorda*, 3807
- Cosmarium*, 3817
polymorphism, dimorphism, 3216
- Cosmarium botrytis*, electron microscopy, 4619
- Cosmarium turpinii*,
chloroplast inheritance, 4667
nutrition, 1045
- Cosmocerca japonica*, 8517
- Costaria*, 6781
- Cottopeca*, southern Chile, 886
- Cottus*, distribution, size composition, abundance, Lake Tahoe, 3655
- Cottus gobio*, 7354
colour change, 5224
feeding, 3027
taxonomy and ecology, 433
vascularization, gills, 3026
- Cottus poecilopus*, taxonomy and ecology, 433
- Cottus scorpius*, 8192
- Cotylurus*, life history, Berlin, 4855
- Cotylurus flabelliformis*, parasite of *Lymnaea catascopium pallida*, 8657
- Counting methods*, bacteria, cultures, 5792
- Coxsackie virus*, 3767
- Crabs*,
apparatus for catching, 1899
blue, volume control by muscle fibres, 1941
chloride fluxes, muscles, 4942
hermit, associated with *Sunariestes*, 164
- Crab fishery*, efficiency of toyama kago, 1907
- Crambe*, 5781
- Crambe crambe*, association with *Spondylus gaederopus* and *Arca noae*, Mediterranean, 6886
- Crangon*, 4911, 4915
- Crangon crangon*, 8252
ecology, Kiel Bight, 4920
fluorescent substances in eyes, 183
growth, moulting and reproduction, 184
tagging, 686
- Crangon septemspinosa*, osmoregulation, 7759
- Crangon vulgaris*, 7466
effects of feeding and starvation, 4039
respiratory pigments, 4040
- Crangonyx richmondensis*, life histories, 6011
- Craspedacusta*, sodium and water metabolism, 4841
- Craspedacusta sowerbii*, California, 119
- Craspedopoma*, 7019
- Crassostrea*, 7087
effects of pesticides on embryology, 6141
enzymes, 3315
West Coast of North America, 4017
- Crassostrea angulata*, "gill disease", 733-740
- Crassostrea commercialis*,
neoplasmas and related disorders, 4147
parasitism by and cause of death by *Hartmannella tahitiensis*, 7078
- Crassostrea gigas*, 7572
aquaculture, Japan, 6135

- Crassostrea gigas**, *contd.*
 effects of steroids, 3463, 3464
 excitatory and inhibitory actions of acetylcholine on heart, 7881
 reaction to homologous tissue implants, 2790
Vibrio parahaemolyticus, Washington, 7573
- Crassostrea gryphoides**, nomenclature, 4144
- Crassostrea virginica**, 3565, 5840
 absorption of Diquat, 741
 amino acids, 7882
 bacillary necrosis, 6137
 bacteriology, 3462
 bored by *Polydora websteri*, 2615
 copper accumulation, 5017
Crassostrea gigas, neoplasms and related disorders, 4145
 ecology, Florida, 250
 gregarious setting, 251
 immunological capabilities, 249
 larvae, feeding on *Monochrysis lutheri*, 2007
 leucocytes in tissue culture, 247
 levels of zinc, North Carolina, 4142
 malformations of shells, Gulf of Mexico, 4148
 neoplasms and related disorders, 4146
 protozoan parasites, nucleic acid patterns, 3891
 reduction of fumarate, oxidation of succinate, 2809
 seasonal gonadal changes, 246
 viability of echinostome metacercaria in, 248
 viral infections, 4765
 zinc enzymes, North Carolina, 4143
- Cratena simba sp.n.**, Tanzania, 7843
- Crayfish**, 4571
 electrical activity of neurons, 5994
 inhibitory miniature potentials in stretch receptor neurons, 1942
 intracellular localization of enzymes, 4950
 transepithelial fluid movement in antennal glands, 8567
 transmitter release at neuromuscular junction, 8561
- Creaseriella**, 7808
- Creatine kinase**,
 invertebrates, 8430
Marphysa sanguinea, 8430
 multiple forms, 4380
- Crenilabrus**, sodium metabolism, 4051
- Crenimugil labrosus**, distribution, Ranafjord, 5440
- Crenobia alpina**,
 chromosome number and ploidy level, 1858
 ecology, Europe, 6899
- Crenomytilus**, 8429
- Crenomytilus grayanus**, 7618
- Crepidostomum**, abundance in fish, Mississippi, 5891
- Crepidostomum farionis**, parasite of *Salmo aguabonita*, control, 5293
- Crepidostomum cooperi**, from *Gasterosteus aculeatus*, 1183
- Crepidula**, factors affecting larval growth, 6120
- Crepidula fornicata**, 7089
 effects of temperature on oxygen consumption, 6108
 feeding behaviour, 6119
 influence of light on fixation, 745
 Japan, introduction, 7857
- Cribrilaria**, systematics and ecology, Mediterranean, 4193
- Cribrilaria crenula sp.n.**, systematics and ecology, Mediterranean, 4193
- Cricotopus**, 3422
- Crimea**, photosynthesizing sulphur bacteria from reservoirs, 3308
- Crinia tasmaniensis**, ecology, 7959
- Crinoida**, associations with *Pseudanthessius* spp.n., Madagascar, 8549
- Crisia aculeata**, 8724
- Crisitectus congeri** *gen. et sp.n.* (Spiruridae), parasite of *Conger vulgaris*, Nantes, 8515
- Cristallichthys cameliae**, 8855
- Cristispira sp.**, Bay of Naples, 5790
- Cristivomer subsp.**, taxonomy, Lake Superior, 4316
- Crisulipora**, 3314
- Crithidia oncopelti**, ribosome sedimentation, 4808
- Criticism**, on "Recent Mollusca of A.A. Gould" by Johnson, 1970
- Crocodylia**, chromosome constitution, 8008
- Crocodylus**, electrolyte and water balance, America, 3533
- Crocothermis servilia**, larvae, 4988
- Crocota crocuta**, 7692
- Crossopterygii**, resemblances of telencephalon with that of Amphibia, 5068
- Crucibranchaea macrochira**, morphology, 7858
- Crucibulum spinosum**, shell shape, growth and movement, Hawaii, 1982
- Crucigenia**, 4508
- Cruises**,
 Anton Bruun and Te Vega, Engraulidae, distribution, Indian Ocean, 4354
 'Bannock', 5791
 'Jean Charcot', 7683
 R.V. Tansei-Marui, molluscan shells, 1968
- Cruise reports**,
 'Jean Charcot', 3-8 December 1968 - commentary, 2915
 'Jean Charcot', 3-8 December 1968 - list of fish, 2916
- Cruoria**, 6725
- Cruoria rosea**, 8389
- Cruoriella elegans sp.n.**, Japan, 2544
- Cruoriopsis**, 6725
- Crustacea**, 4571, 5549, 5609, 7116, 8117, 9052
 bioassays of herbicides, 9081
 carbohydrase activity, 6934
 caves, Virginia, 7742
 deutocerebral organ, 7749
 distribution, Netherlands, 3351
 effects of rhizocephalan parasites, 5984
 enzymes, 661
 factors inducing fertility in aseptical species, 5946
 feeding in the Sea of Azov, 1940
 fishing industry, Alaska, 8556
 food conversion, 4936
 food for *Balaenoptera borealis*, Antarctica, 8841
 glycolytic activity, 5987
 infauna, Chile Bay, 4528
 lactic dehydrogenase isozyme patterns, Carolina, 8553
 Laptev Sea, 6950
 North Greenland, 7739
 osmoregulation, 7753
 parasitic, from fish, Volta Basin and South Ghana, 1887
 phylogeny, 173
 population dynamics, Mindelsee and Buchensee, 4491
 predation by Pisces, California, 8041
 simulation of population using computer, 6603
 stridulation, 146
 synaptic vesicles, 3978
 thiaminase, Philippines, 4573
 viability of larvae in polluted waters, 7472

Crustacea, contd.

- zooplankton of Lake Ontario. 959
- zooplanktonic, stochastic model. 7433
- Cryobiology**, potentialities in extreme environments. 4568
- Cryptospora glauca**, taxonomy and distribution. 2747
- Cryoprotective agents**, effect on free fatty acid formation in frozen Salmo. 854
- Cryptarcha strigata**. 8614
- Cryptina raibeliana**. 7084
- Cryptobia salositica**, refractive granules. 617
- Cryptocerata**. 7003
- Cryptococcus albidus**. 5798
- Cryptocotyle lingua**, causing lowered heat tolerance in Littorina. 724
- Cryptocystidea**, taxonomy. 7934
- Cryptolepas rhachianecti**, on Eschrichtius robustus, California. 8845
- Cryptomonas**. 5756
 - sexual reproduction. 5757
 - ultrastructure. 4732
- Cryptomonas ovata var. palustris**, fatty acids. 582
- Cryptonemia subdichotoma sp.n.**, Solomon Islands. 8280
- Cryptophyceae**. 7437, 7488
 - ultrastructure of chloroplasts. 5756
- Cryptophytes**. 3322
- Cryptoplax striatus**. 7105
- Cryptospora ventricosa**, taxonomy and distribution. 2747
- Cryptotethya crypta**. 6714
- Cryptothecodinium cohnii**. 5853
- Cryptothyrella**, distribution, Ohio, Kentucky. 6194
- Crystallite size**, in natural cellulose. 2504
- Crystalloids**, of Phycomyces blakesleeanus. 606
- Ctenocladus**, distribution, taxonomy, British Columbia. 8354
- Ctenolucius**, osteology. 5335
- Ctenopharyngodon**. 5339, 6376
 - aquaculture, Russia and Far East. 3632
- Ctenopharyngodon idella**. 3564, 3566, 4370, 5340, 6478, 7314, 8233
 - aquatic weed consumption, estimation. 4365
 - control of water weed. 8137
 - distribution, Czechoslovakia. 6454
 - haematology. 871
 - hybrid with Hypophthalmichthys molitrix. 8144
 - nutritive value of food. 7314
 - salinity tolerance. 7313
 - weed control, Far East. 3560
 - weed control, India. 8223
- Ctenophora**. 4840
 - culture apparatus. 5877
 - Nudictenidae, Beroe ovata, development and tissue interactions during regeneration of lips. 3916
- Cuba**,
 - coast, metabolism of Penaeus schmitti. 2664
 - Gambusia rhizophorae sp.n. 3690
- Cubomedusae**, taxonomy, Japan. 4834
- Cucumaria**, haemoglobins. 8711
- Culaea inconstans**,
 - burrowing. 5441
 - purines responsible for silvering. 813
- Culeolus parvus**. 7138
- Culex albistrois**, taxonomy. 4983
- Culex pipiens**. 7007
 - acclimation of respiration. 4102
 - electron microscopy, anal papillae. 4984
 - overcrowding in larval populations. 6075
 - parasitism of larvae by nematodes. 7008
- Culex tarsalis**, biological control, California. 7829
- Culicidae**,
 - breeding waters. 7827
 - instar determination. 2712
- Culicoides furens**, hatching. 4101
- Culiseta graphyoptera**, ecology. 8621
- Culling**, Callorhinus ursinus, Pribilof Islands. 6303
- Culture**,
 - Acrochaetium pectinatum. 1791
 - agar, Gracilaria. 7539
 - Alaria, Newfoundland. 6783
 - Alaria, sub-arctic. 6783
 - algae. 1745, 3221, 6770
 - algae in synthetic medium. 2483
 - algae, indicators of pollution, Oslofjord. 6673
 - algae, nutrient medium. 4593
 - algae, photoassimilation. 3197
 - algae, properties of algal sheath. 5637
 - Anabaena variabilis, diphenylamine. 4607
 - Aphanizomenon flos-aquae. 4611
 - Aphelidium chlorococcarum. 5831
 - Astasia longa. 4642
 - axenic, of Laminariales. 1786
 - bacteria. 7569
 - bacteria-free, of phytoplankton. 478
 - behaviour, bacteria. 5787
 - bacterized Cladophora glomerata. 2512
 - benthic marine algae. 9104
 - biomass production, Chlorophyta. 8369
 - blood culture for chromosomes, Pisces. 8852
 - Bonnemaisionia. 3265
 - Brachionus calyciflorus. 5924
 - Bryozoa. 6186
 - Calanus helgolandicus. 5962
 - Callithamnion byssoides life histories. 3267
 - carotenoid interconversion, Amphidinium klebsii. 4731
 - cell division phasing, Euglena. 7550
 - Chlorella. 6759
 - Chlorella, carbohydrate changes. 4655
 - Chlorella ellipsoidea. 7513
 - Chlorella, flocculation and deflocculation of aqueous suspension. 8339
 - Chlorella pyrenoidosa, adaptation to temperature changes. 8348
 - Chlorella pyrenoidosa, effects of dichlorophenoxy-acetic acid. 4662
 - Chlorella sorokiniana, numerical taxonomy. 3298
 - Chlorella, starch-degrading enzymes. 7515
 - Chlorella, use in toxin research. 5707
 - Chlorella, UV-inactivation and photoreactivation. 8345
 - Chlorophyceae. 8328
 - Chrysophyceae. 2498, 8310
 - clones, Chitodonella cucullulus. 5833, 5834
 - clones, Scenedesmus. 3244
 - Coccolithophora, radioactive contamination. 1761
 - Copepoda. 5957, 5958, 5960
 - Cyanophyceae. 5634
 - Cyclotella, Cylindrotheca, phosphorus requirements. 4624
 - device for obtaining axenic cultures, algae. 3285
 - Dictyocha fibula, growth and morphology. 4625
 - effect of microflora on organic accumulation, Chlorella. 5715
 - embryology, Loligo vulgaris. 8689
 - estimation of numbers. 5792
 - estimation of numbers, Chlorophyta. 4636

Culture, contd.

- Euglena*, temperature-synchronized, 1795
- Eurytemora*, 5972
- experimental, *Penaeus duorarum*, Florida, 4960
- experimental, *Penaeus* spp, Louisiana, 4961
- fish larvae, 6334
- Florideophycidea, 5742
- Gracilaria confervoides*, Adriatic, 5744
- growth of isolated shoot apices, *Eichhornia crassipes*, 5810
- Hydra*, 5870
- Ichthyophthirius multifiliis*, 3318
- in vitro, testis cord, *Triturus pyrrhogaster*, 7199
- iron bacteria, 493
- joint, *Chlorella* and yeast, 1047
- Kirchneriella obesa*, 5831
- laboratory, *Aedes*, *Anopheles*, 6068
- laboratory, algae, 6729, 8288
- laboratory, artificial microhabitat for Protozoa, 5825
- laboratory, benthic marine algae, 5746
- laboratory, cultivation of marine ciliates and heterotrophic flagellates, 5853
- laboratory, elemental phosphorus effects on L-cells in suspension, *Clupea harengus*, 5592
- laboratory, larvae, *Rhithropanopeus harrisi*, 4971
- laboratory, lobster larvae, 4935
- laboratory, *Tilapia mossambica*, 3029
- laboratory, Trichoptera, 6070
- Lagenisma coscinodisci*, 1129, 7587
- Laminaria hyperborea*, 5735
- larvae, *Cancer irroratus*, 6002
- larvae, *Charybdis*, Pakistan, 4917
- larvae, *Elamena*, *Pinnotheres*, 4923
- larvae of decapod, methods, 5986
- larvae, *Palaemon serratus*, 6979
- larvae, *Penaeidae*, 2663
- larvae, *Rana esculenta*, 7167
- marine algae, 5622
- marine invertebrates, 7474
- monodisperse suspensions of synchronous cells in defined medium, 1823
- monoxenic, *Proteocelis luteola*, 3338
- Myriotrichia* from *Hecatonema* zooids, 1787
- Nassarius*, *Crepidula*, maintenance using artificial feed, 6119
- Nostoc*, *Scytonema*, elemental nitrogen fixation, 3203
- nutrition, phagotrophic Protozoa, 5845
- Octopus joubini*, laboratory cultures, 5037
- Oncorhynchus nerka*, maturation and body size, 5275
- organotypic culture of larval gonads, *Bufo bufo*, 5079
- Oscillatoriaceae in synthetic medium, 530, 3205
- osmoregulation in decapod larvae, 5999
- ovaries, *Thalamita crenata*, 7809
- Phaeaster pascheri*, 544
- Phaeocystis poucheti*, 5679
- Phycomycetes, 5806
- physiological consequences, *Mytilus edulis*, 6147
- Pythium*, 7588
- Platydorina caudata*, autoinhibitors, 4678
- Pleurobrachia*, *Bolinopsis*, *Beroe*, 5877
- Pomatoschistus* spp, 6513
- Porphyra*, *Conchoecelis* phase, 1799
- Porphyra*, diseases, 3279
- Porphyra*, seawater medium, 3275-3278
- production of amino acids from algae, 5626
- Pseudodiptomus ardjuna*, 7731
- Pythium marinum*, 5749
- rearing penaeid shrimp larvae, 2669
- rectangular circulating rearing pond for Salmonidae, 6333
- requirement of brown algae for iodine and bromine, 1069
- Rhodochorton purpureum* and *R. tenue*, 1803
- Rhodophyta, nutritional requirements, 4704
- rhythmic settling, *Euglena gracilis*, 7551
- Rotifera, Hiddensee, 5930
- Salicornia stricta*, 4793
- salt and flooding tolerance, *Puccinellia*, 6828
- Scenedesmus*, *Chlorella*, 5705
- Scenedesmus*, effect of fungal parasites, 1783
- Scenedesmus quadricauda*, 6770, 6771
- sea urchin, 7907
- shallow water sedimentary organisms, requirement of oscillating water movements, 5860
- supply of carbon dioxide to algae, 4592
- technological problems, algae, 6731
- Tetrahymena*, effect of pressure on ribosomes, 1147
- Tetrahymena pyriformis*, effect of colchicine, 8453
- Thuretellopsis peggiana*, 8389
- tissue culture chamber, *Phycomycetes*, 3304
- trapping of dieldrin, *Chlorella pyrenoidosa*, 5708
- 'trichterkeisel', invertebrate culture, 6704
- Uronema*, 1838
- variability, *Stichococcus*, 6774
- vitamin B₁₂, as nutritional requirement, *Skeletonema costatum*, 5684
- Volvox*, Europe, 7528
- Volvox rousseletii*, 6780
- Warburg effect, *Euglena gracilis*, 4735
- Cumacea**,
 - distribution, 4072
 - Greenland, 7740
 - life-history, 185
- Cumopsis goodsiri*, life-history, 185
- Cuneiphycus*, 5629
- Cupelopagis vorax*, anatomy and histology, 6917
- Curaçao*, littoral algae, 3790, 3791
- Currents**,
 - bottom, measurement, 3170
 - effects of water temperature and salinity on formation at equator, 6641
 - reaction to *Pleuronectes platessa*, 1632
 - surface currents, Cape Agulhas, 4525
- Current-voltage relations**, during illumination of photoreceptor membrane in *Balanus*, 672
- Curve fitting, growth curve, *Dicathais*, 7860
- Cushmanidea elongata*, 7812
- Cuspidaria parapodema* sp.n., diagnosis, 731
- Cuticle**,
 - algae, 2477
 - Cancer antennarius*, pores, 6005
 - Cancer productus*, 6005
 - Glossiphonia complanata*, 1872
 - lipids, *Pteronoarcys californica*, 1960
 - Orconectes sanborni*, sclerotin, 1922
- Cyamon neon*, ultrastructure of mesogloea, 4829
- Cyanea palmstruchi*, development of periderm and podocysts, 2581
- Cyanidium caldarium*, temperature tolerance, 7491
- Cyanogomphus*, 7001
- Cyanophages**, see **Viruses**.
- Cyanophyceae**, 4582, 5622, 6599, 7428, 7434, 7467, 7487
 - aerobic and anaerobic conditions, growth effects,

Cyanophyceae, contd.

- 7490
amino acid composition, 3202
Argentina, 4604
Bermuda waters, 1757
blooms in fish ponds, 2488
blooms in Saskatchewan lakes, 2489
boring, 2492
characteristics of mutant, 6735
ecology, littoral, Oahu, 8291
effect of desapadin and DCMU on photokinesis, 528
effect of temperature and manganese, 2479
fate in nature of photosynthetically assimilated carbon 14, 1031
glucokinase activity, 6749
Iceland, 4605
influence of nitrogen on heterocyst production, 1748
isolation and purification of intact gas vesicles, 1022
literature 1967-1968, with supplements for 1960-1966, 522
Marseilles region, 3793
microscopy of polyphosphate bodies and gas vacuoles, 8295
Mount Abu, India, 523
N₂-fixing, growth in fixed N₂, 2495
nitrogen fixing, effects on crops, 3211
nitroguanidine mutagenesis, repair, 2491
origin of filamentous condition and phylogeny, 8292
permeability to gases, 3201
pigments, 5630
pigments and UV-absorbing substance, 115
plankton, 4487
population control, Netherlands, 3199
Precambrian fossils, 7489
preparation of metabolic active protoplasts, 1751
proteins, labelling for nuclear magnetic resonance, 3206
respiration, 12
Romanian Black Sea littoral, 1747
Ross Island, Antarctica, 3801
studies on phycoerythrins, 1020
taxonomy, 3198, 8290
taxonomy, Stigonematales, 3209
thermal, of India, 524
thermophilic, 8294
uptake of glycine, 3799
- Cyathocrinites planus**, designation of type-species, 7112
- Cyathocrinites tuberculatus**, 7112
- Cyathura**, chromatographic studies, 3369
- Cyathura carinata**,
ecology, Baltic Sea, 4921
Norway, 8575
seasonal variation in size and reproductive cycle, 1908
- Cybister**, steroids, defensive secretions, India, 6076
- Cybister limbatus**, steroids in defensive secretion, 2713
- Cybister occidentalis**, 7863
- Cyclammina**, association, Gulf of Taranto, 5551
- Cyclammina cancellata**, 5551
- Cyclastraea meltensis sp.n.**, Bulgaria, 8469
- Cyclic activity**,
lunar periodicity and abundance, prawns, Godavari estuary, 4070
periodicity in drift activity, water mites, 6090
reproduction, Chelonia, 8012

- Cyclic nucleotide phosphodiesterase**, erythrocytes, frog, 8790
- Cyclidium citrullus**, 3317
- Cyclinella**, 7877
- Cyclocoelum spp.**, taxonomy, 5892
- Cyclocotyloides pinguis**, parasite of Chalinura, Hemimacrus, 5888
- Cyclograpsus punctatus**,
biology and ecology compared with Sesarma catena, 210
detection of 2-aminoethylphosphonic acid in phospholipids, 8576
- Cyclophyllidea**, distribution, Torpedo californica, 4301
- Cyclopinodes**, 4007
- Cycloplectanum americanum**, 7680
- Cyclopoida**, 5546
biomass and distribution, Indian Ocean, 5952
distribution, North Italy, 3997
life histories, 7727
parasitism, Holothuria, 5966
- Cycloprididae**, distribution, Canada, 6062
- Cyclops**, 5408, 6606
- Cyclops abyssorum f. taticus**, taxonomy, 1885
- Cyclops bicuspidatus thomasi**, reducing standing crop of zooplankton, 481
- Cyclops scutifer**, naupliar development, Oslo, 7727
- Cyclops strenuus**, 4491
- Cyclops varicans**, anaerobiosis, 1225
- Cyclops vernalis**, 6654
- Cyclospira**, 7130
- Cyclostrema miranda**, synonym of Tornus subcarinatus, 2748
- Cyclotella**, 5643, 5687, 6742
clones, male gamete and auxospore production, 5661
taxonomy, ultrastructural study, 5669
- Cyclotella cryptica**, 5504, 5672
induction of valvae formation, 5667
male gametes and auxospores, 1763
- Cyclotella iris**, taxonomy, 7497
- Cyclotella meneghiniana**, 5668
male gametes and auxospores, 1763
- Cyclotella nana**, 3709, 5670, 9088
osmosis and ionic requirements, 5671
phosphorus content and growth rates, 4622
phosphorus requirements, 4624
- Cyclotelles**, 7497
- Cyclotrichium meunieri**, cryptomonad symbiont, 2537
- Cylindrical bodies**, Trichodesmium erythraeum, 1032
- Cylindrobulla japonica sp.n.**, Middle Japan, 4118
- Cylindroleberis mariae**, 7812
- Cylindropyxis profunda**, ultrastructure of frustules, 2496
- Cylindrosperrum muscicola**, N₂-fixation in mixed culture, 592
- Cylindrotheca closterium**, phosphorus requirements, 4624
- Cylindrotheca fusiformis**, role of silicon in DNA synthesis, 4623
- Cymatiidae**, shell growth, New Zealand, 7844
- Cymatium**, anatomy and biology, 1983
- Cymatium lotorium**, taxonomy, 7048
- Cymatium ranzanii**, distribution, Kuria-Muria Islands, 7859
- Cymatogaster aggregata**, 5389, 5968
- Cymbella**, 6742
- Cymbella jordani**, 5673
- Cymbella microcephala**, 6742
- Cymodocea nodosa**, 4540

- Cymopolia*. 3828
Cymopolia inflataramosa sp.n. 5720
Cymothoa excisa, French Guiana, 4043
Cymothoidae,
distribution, Gulf of Marseilles, 4037
ecology, cuticle, Mediterranean, 4060
Gulf of Marseilles, 181
Cynoglossus brevis, 8192
Cynolebias bellottii, life-history, 456
Cynoscion macdonaldi, exploitation, Gulf of California, 5393
Cynoscion nebulosus, 3565, 7270, 8210
Cynoscionicola heteracantha, 5881
Cyphoma, revision of genus, 224
Cypraea,
eastern Pacific spp. 225
from Guam, 226
secretion of acid, Pacific, 3452
Cypraeacea, bibliography, radula, 7022
Cypraeidae, Red Sea, Massawa, 2749
Cypricerus, 4975
Cypridina, 8985
Cypridiniformes, distribution, eastern tropical Atlantic, 3986
Cypridopsinae, distribution, Canada, 6062
Cypridopsis,
aggregation with *Cyprinotus*, 6061
spermiogenesis and studies on sperm, 4091, 4092
Cypridopsis aculeata, 7812
Cyprina islandica, 5545
Cyprinidae, 7449, 8038
brain study in relation to phylogeny, 8933
cellular adrenocorticotropin, 8934
chromosome constitution, 3642
distribution, Canada, 4975
ecology of minnows, Danube Delta, 8932
effect of alarm substance on predation, 8935
hybrids, 5313
parasitism by *Monogenea*, Africa, 6900
suppressed in favour of *Arcticidae* (Mollusca), 2788
Cypriniformes,
histogenesis, neurosecretory preoptical neurohypophysis, 8931
hybridization, 416
Cyprinion,
morphological differentiation, Iraq, 7315
Pakistan, 5331
Cyprinodon dearborni, 7389
Cyprinodon variegatus, 4477, 6544, 8238
Cyprinodontidae,
competition, Netherlands Antilles, 7389
ecology, Louisiana, 6544
Cyprinoidea, type specimens, Thailand, 4356, 8930
Cyprinotus, 4975
aggregation, 6061
Cyprinotus cf. *salinus*, 7000
Cyprinus, 3634, 7319, 8126
accumulation of zinc, 6455
actinomyosin preparation from muscle, 6457
aquaculture, 8119
aquaculture, with *Salmo*, 3619
artificial and natural feeding ecology, pond carp, 8954
ATP sensitivity of actomyosin and myosin, 7322
chemoreception in lateral-line systems, 812
diseases, Poland, 3640
effects of α -tocopherol deficiency, carp, 8956
embryology, 6452
enzymes in hepatopancreas, 8125
enzymes, vitamin B, 8124
gas tension in tissues, 7284
hybrids of *Carassius*, brain patterns, 4364
larvae, food conversion, protein, 7323
larvae, nutrition, amino acids, 7324
muscle changes, protein during winter, 8122
nucleic acid levels, 8125
osmoregulation, 8121
population estimates, carp-bream, Istra Reservoir, 8955
preparation of myosin from muscle, 6456
production of nicotinic acid by intestinal bacteria, 6459
soluble fish collagen immunology, 7318
superprecipitation of actomyosin, carp, 8953
temperature adaptation at protein level, 4309
variations of contents of ATP-breakdowns in meat and serum protein, 8123
Cyprinus carpio, 3564, 3566-3569, 3636, 5339, 5565, 5614, 5615, 6721, 7150, 8084, 8086, 8854, 8961, 8987
aerocystis, aetiology, 868
aerocystis, pathology and therapy, 869
amino acid sequence, cytochrome c, 5334
antibodies, temperature effects, 2997, 2998
aquaculture in floating net cages, Far East, 3637
aquaculture in recirculating tanks, Far East, 3637
avoidance of anglers, 8958
blood cells, 8138
cardiac output, 5333
effect of asphyxia and exhaustion on plasma and glycaemic free fatty acids, 407
effect of temperature on development, 4363
esterases, spinal cord, 8139
fatty acid amide, 8987
form recognition, 404
fragmentation of fish myofibril, 3577
gene duplication, 5327
infectious swim bladder disease, 3639
influence of the rhopic factor of indices of nitrogen, 8960
malathion uptake, 5332
metabolic rate, larvae, 3635
metabolism of palmitic acid, 7316
muscle AMP-aminohydrolase, 405
nucleic acids, 816
parasitic *Urceolariidae*, 113
parasitism by *Argulus foliaceus*, 6942
parasitism by *Atractolytocestus huronensis*, North America, 5885
pathological scales, 6460
pentose phosphate cycle enzymes, 2062
production of vitamin B₁₂ by intestinal microorganisms, 8957
reaction of intestine to environmental stress, 6461
water regulation, thermally acclimated carp, 8959
Cypris, 4975
Balanus balanoides, 171
Cypris monstifica, taxonomy, 3418
Cypsilurus opisthopus, migration and spawning, Japan 3688
Cyrtentactinia, 6854
Cyrtodaria, 7874
Cystamine, inhibiting cell division in *Euglena*, 1091
Cysticeroids, *Sobolevicanthus krabbeella*, 129
Cystidicola farionis, 6549
Cystidicolinae, 3950

Cystoseira. 4585, 6781
Cystoseira barbata. 7467
Cystoseira mediterranea, qualitative and quantitative studies. 3837
Cystoseira stricta. 7468
Cystoseiraceae, *Stolonophora* gen.n., Mexico. 1789
Cysts,
Acetabularia mediterranea. 4639
Peridinium cinctum, Lake Kinnereth. 3289
Cythereis rivulorum. 6999
Cytheretta ponceana sp.n., Puerto Rico. 4976
Cytheridae, ultrastructure, normal pore system. 6998
Cytherois. 8606
Cytochemistry,
of oogenesis in *Hyanassa obsoleta*. 2757
polysaccharide and calcareous inclusions in *Spirostomum*. 624
protein emission, auxocyte nuclei, *Amphibia*. 5096
Cytochrome a₃, destruction by light in *Prototheca zopfii*. 572
Cytochrome oxidase, *Blastocladiella emersonii*. 4769
Cytokinesis, in *Oedogonium*. 1054
Cytokinins, as endogenous growth regulators in *Ecklonia* and *Hypnea*. 56
Cytology,
blood cells, *Chiloscyllium greshium*. 351
Boodlea siamensis, *Chamaedoris auriculata*. 8329
Chlorophyta. 7499
clarification, hybrids, frog x toad. 6215
contractile vacuoles, *Amoeba proteus*. 7631
cytotaxonomy, *Lymnaeidae*. 3443
Derbesia marina. 42
haematology, *Scomberomorus maculatus*, Brazil. 4352
Leptodiscinae. 588
liver, *Ambystoma tigrinum*. 5076
mitosis in plant cells. 1742
mucopolysaccharides, *Ciona intestinalis*. 7941
Oocystis. 6748
Pithophora oedogonia. 569
Porphyra spp. from *Nereocystis lueketeana*. 8386
ribosomal subunit exchange, *Dictyostelium purpureum*. 7633
trichocyst distribution, *Urostyla cristata*. 7652
trichocysts and paracrystalline inclusions, *Noctiluca miliaris*. 3853
Zonaria farlowii, reproduction. 1790
Cytophaga. 3462, 3726
Cytophotometry,
amount of DNA in *Paramecium caudatum* micro-nucleus. 3894
neurosecretory preoptico-hypophysial system, *Teleostei*. 8887
Cytoplasm, role in division delay-killing and photo-reactivation in *Amoeba*. 1152
Cytoplasmic determinants, transmission in amoebae by micro-injection of RNA-containing fractions. 1140
Cytoplasmic inheritance, *Paramecium aurelia*. 7641
Cyzicus hierosolymitanus, haemoglobin. 6012
Czechoslovakia,
distribution of *Harpacticoida*. 161
Ephemeroptera, new spp. 2715
fecundity of *Perca fluviatilis*, Kličeva water reservoir. 440
Megaloptera. 3431
Moravian watercourses, identification of fish zones. 3553

rivers, vegetation and hydrology. 3103
Salmo trutta in the Danube. 389

D

Dactinomycin, effects on development, sea urchin. 2831
Dactylogyridae, new species, Alabama. 8480
Dactylogyrus,
parasitism of *Cyprinidae*, Africa. 6900
Sweden. 8496
Dactylogyrus spp.n., India. 8481
Dactylogyrus extensus. 4366
Dactylogyrus lamellatus, artificial parasitism of *Hypophthalmichthys molitrix*. 5893
Dactylogyrus minutus. 8480
Dactylogyrus vastator. 4366
Dactylometra. 4833
Dactyloscopidae, 3 new spp from tropical W. Atlantic. 888
Dalatias licha. 5164
Dams and reservoirs,
aquaculture, Iran. 3583
ecology, Lake Kariba. 7818
guides for migrating salmon and trout. 5284
impoundment biology, Wilson Reservoir, Kansas. 8220
Lake Volta, ecology. 4514
limnology, California. 3723
operational research, Israel. 3731
primary productivity, Mettur Dam. 4503
thermal pollution, effects on phytoplankton. 4488
(dA)n·(dT)n, hydrolysis by micrococcal nuclease. 1227
Danielssenia minuta sp.n., Bermuda. 3360
Danube River, (see also Rivers). 3752
algal biomass, drift. 3128
Chironomidae ecology. 3422
Enterobacteriaceae distribution in surface waters. 3297
Daphnia. 3979, 5408
chemical control. 7718
ecology, Bull Shoals Reservoir. 7720
feeding behaviour. 1879
filtering rate, temperature and body size. 1880
Daphnia cucullata, Kiev reservoir. 3982
Daphnia galeata, cyclomorphism, Oregon. 7719
Daphnia hyalina, Kiev reservoir. 3982
Daphnia longispina. 4492, 6938, 8101, 8540
Daphnia magna,
adaptation to toxic conditions. 7721
fertility. 5946
phototactic reaction. 1878
sites of neurosecretory activity. 149
Daphnia middendorffiana, reproductive cycle in Arctic pool. 667
Daphnia pulex,
morphology of neurosecretory system. 3984
pH tolerance. 1212
photoperiod control of diapause. 5950
ultrastructure of optic nerve and ganglion opticum. 3985
Daphnia zschokkei, redescription. 150

- Daphniopsis pusilla*, Australia. 1881
- Dardanus*, associated with *Sunaristes*. 164
- Dardanus arrosor*. 4922, 5863
- Dardanus gemmatus*, commensal association with *Calliactis polyopus*, Hawaii. 5862
- Dardanus venosus*. 5863
- association with *Calliactis tricolor*. 117
- Darwinula malayica*. 7000
- Darwinula stevensoni*. 6946
- Dasson cyprinoides*. 8163
- Dasya pedicellata*, salinity effect on growth. 5740
- Dasyatis*, distribution, Georgia. 4295
- Dasyatis americana*, association with *Caranx ruber*, Grand Cayman. 5210
- parasitism by *Acanthobothrium*. 5883
- Dasyatis centroura*. 8483
- biology and distribution. 352
- Dasyatis imbricatus*, parasitism by *Orchispirium*. 5909
- Dasyatis pastinaca*. 5164
- Dasyatis sabina*, occurrence of melanosomes and crystal sacs, tapetum lucidum. 8880
- Dasycladales*, cytology, reproduction and taxonomic revision. 3828
- Dasyptilon*. 4705
- Data**, direct bacterial counters. 5783
- fishing industry, Wadge Bank. 5173
- plankton. 5479
- taxonomic. 3177
- Data analysis**, neurons of optic region, frog. 6248
- Data collection**, buoys. 6351
- d(A-T)_n, hydrolysis by micrococcal nuclease. 1227
- Day length**, effect on gonad development in *Gasterosteus*. 929
- DCMU, causing structural changes in *Euglena gracilis*. 1088
- DDT, effect, G6PD, Salmonidae. 4338
- DDT-¹⁴C, metabolism by *Nereis diversicolor*. 1202
- Dead Sea**, rearing *Tilapia* hybrids in brackish water. 3673
- salt waters near, fish rearing. 3569
- Debromoaflatoxin**, isolation from *Laurencia okamurai*. 63
- Decapoda**. 5529, 6605, 7739
- Australia. 1939
- Canadian coast. 689
- carotenoproteins. 7752
- circumesophageal nerve. 4911
- endocrine control of reproduction. 6957
- gills as habitat for parasites. 7690
- haemocyanin, chromatographic analysis. 7737
- lab culture of larvae. 5986
- larvae, planktonic, Kamchatka shelf. 4906
- mangrove swamps of Pernambuco. 1906
- neuronal co-ordination of rhythmic maxilliped beating. 673
- Niokolo-Koba National Park, Senegal. 1238
- respiratory sensory system. 206
- Decapterus lajang**. 5430
- Decomposition**, Actinomycete content allochthonous leaf. 3301
- fungal, of *Mysis relicta*. 1920
- histamine formation. 5188
- histamine formation, *Hafnia*. 4758
- Lake Vyalozero. 6610
- mineral loss, *Typha latifolia*. 4795
- organic material, ocean. 9136
- submerged leaves. 3081
- Thalassia testudinum*. 5819
- Decompression**, effect on activity of microorganisms. 3855
- Deidifferentiation**, cephalic and caudal regeneration in *Syllis*. 659
- Defence**, steroids in defensive secretion of *Cybister limbatus*. 2713
- Deformities**, high incidence, in *Paralabrax nebulifer*. 902
- Degeneration**, microbiological study, of *Homarus americanus*, British Columbia. 6024
- nerves, *Oryzias latipes*. 6572
- Dehydration**, for preservation of organisms. 6354
- Dehydrogenases**, *Amoeba proteus*. 5830
- amphibian mitochondria. 2873
- effect of nitrogen source, *Chlorella*. 7514
- nitrate and ammonium nitrogen effect, *Chlorella*. 556
- nitrogen effects, *Chlorella*. 4657
- Polychaeta*. 8521
- Rhinichthys*. 5345
- skeletal muscle, *Pleuronectes platessa*. 5466
- temperature effect, *Pleuronectes platessa*. 5466
- Deirochelys reticularia**, ecology and population dynamics. 2892
- Dellichthys morelandii*, association with *Evechinus chloroticus*. 4447
- Delocrinus brookensis* sp.n. 8702
- Delphinapterus leucas**, body size. 2902
- tagging in the Canadian Arctic. 789
- wintering in James Bay. 790
- Delphinoidea*, parasitism by *Nasitrema*. 5906
- Delphinus*, oesophagus and stomach histology. 3550
- Delphinus delphis*. 5159, 6310
- echolocation. 8029
- ferrimyoglobin. 8831
- hydrolysis of myoglobin. 7216
- morpho-functional features of acoustic organs. 8830
- muscular carnosine. 788
- skull structure. 5156
- ultrastructure of adenohypophysis. 4258
- Deltopylum rhabdoides**, Krakow, Poland. 97
- life cycle, bipartition between trophont and theront stages. 5837
- Demeijerea*, taxonomy. 8622
- Demeijerea atrimanus*. 8622
- Demeijerea atrimanus rufipes*. 8622
- Demospongea*. 7654, 7657
- Demospongiae*. 3903, 3904, 6871, 6872, 6884
- Fiji. 3908
- Dendroaster excentricus*. 7913
- interconversions of oestrogen. 6176
- Dendrobates azureus* sp.n., Surinam. 2055
- Dendrocoelopsis ezensis*, copulation under light conditions. 4856
- Dendrocoelum lacteum*. 3946, 6906
- Dendrodoa grossularia*. 5060
- Dendrophyllia*. 4842
- Dendrophyllia indica* sp.n., from the Indian Ocean. 3922
- Dendrophyllia minuscula*, record from the Andamans. 3936
- Dendrophysa hooghliensis*, abnormalities. 7601
- Dendrostomum zosteriolum*, immunology of sipunculid

- Dendrostomum zosteri* *colum*, contd.
fluid, 1198
- Denmark,
Bjørnøya, bird fauna, 2896
Gulf of Aarhus, *Salmonella*, 3300
- Density,
carrying capacity of salmonid hatcheries, 4312
elasmobranchs, 807
- Density effects, *Bufo americanus* tadpoles, 2849
- Dentalina* *godjeni*, 3897
- Dentalium,
eggs, 2820
electron microscopy of first polar lobe of egg, 7106
- Dentalium dentale*, eggs, Feulgen-positive granules, 2821
- Deoxyribonucleates, of *Brachyrrhyncha*, 674
- Deoxyribonucleic acid, see DNA.
- Derbesia marina*, cytology and development, 42
- Derilissus kremnobates* *sp.n.*, West Atlantic, 4448
- Derilissus vittiger* *sp.n.*, West Atlantic, 4448
- Dermadin, antibiotics, 1745
- Dermasterias imbricata*,
predation on *Strongylocentrotus purpuratus*, 8712
purification of trypsin-like proteases, 8713
- Dermatobranchius walteri*, taxonomy and distribution, 7038
- Dermochelys*, occurrence, western Indian Ocean, 4251
- Dermochelys coriacea*, 5222
ecology, Trinidad, 4252
La Coruna, 5143
unrecorded W. Indian nesting sites, 779
- Dermocorynus*, 6725
- Dermocystidium* *sp.*, nutrition and respiration, 602
- Deroceas*, 7019
- Derocheilocaris ingens* *sp.n.*, Maine, 4096
- Derogenes varicus*, from *Gasterosteus aculeatus*, 1183
- Deronectes canaliculatus*, distribution, Denmark, 8623
- Desiccation,
effects in *Sudanonates africanus africanus*, 1938
Thais lapillus, function of operculum, 4134
tolerance, *Bufo marinus*, South Florida, 5081
- Desis crosslandi*, Madagascar, 2730
- Desmarestia*, 6725, 6781
- Desmidae, from Brazil, 3817
- Desmidiaceae,
electron microscopy, 4619
resistance of calcium withdrawal, 4618
- Desmocytes, cnidarian, 1845
- Desmognathus*, dispersion patterns along brook, 4218
- Desmognathus fuscus*, 6223
- Desmogomphus*, 7001
- Desmotrichum undulatum*, 5733
- Destruction of organisms, Kiev reservoir, 3856
- Desulfovibrio*, influence of sodium chloride, 4757
- Desulfovibrio desulfuricans*, 5774
- Detergents,
degradation, algae, 2414
effects of detergents on *Nucella lapillus*, 1005
influence of sodium chloride on *Desulfovibrio*, 4757
oil treatment, 5616
pollution, 4489
pollution, *Scolecopsis fuliginosa*, 4557
synthetic, biodegradability, 2424
- Detonula,
environmental effects, influence on mitosis, 3217
mitosis, Norwegian coast, 3217
- Detritus,
food for *Calanus helgolandicus*, 5963
Thalassia testudinum, 5819
- Deuterium, growth of *Salvelinus* eggs in, 390
- Deuteromycetes, Japan, 4767
- Development, (see also Embryology)
abbreviated, in caridean shrimps, 2682
adhesive organ in *Loxomespilum*, 651
Maria and *Hedophyllum* gametophytes, in saline pond water, 1784
androgenic glands, *Pandalus platyceros*, 6035
Aplysia, DNA/nuclear size ratio, 720
Artemia salina, lactate dehydrogenase activity and anaerobic metabolism, 662
Aurelia, podocysts in, 2580
Balanus balanoides larva, 171
Beroe ovata, 3916
Callotetrarhynchus *sp.*, 1171
Camallanus lacustris, 131
Caryophyllaeus laticeps, River Avon, 8493
caudal process in *Xiphophorus* *spp.*, 949
Caulerpa sertularioides, 2503
cell movements in differentiating *Podocoryne* hydranths, 640
Chaetomorpha darwinii, 34
changes in aspartate aminotransferase activity in *Strongylocentrotus* egg, 757
changes in retina, during development, bullfrog, 4223
chemical factors affecting early development of *Euchaeta japonica*, 156
circulatory system, *Ciona robusta*, 4207
Clinostomum marginatum, from frog and chick, 5889
Coleochaete, 2523
Coleochaete, stochastic approach, 40
Conchoecetes artificiosus, 4038
Cyanea periderm and podocysts, 2581
Cyprinus carpio, at different temperatures, 4363
Derbesia marina, 42
differentiation, active groups of evoking proteins, *Triturus pyrrhogaster*, 5133
differentiation capacity of isolated *Misgurnus* blastoderm, 877
differentiation, effect of genic time-factors, Mollusca, 6101
differentiation, inductive factors, *Hydra*, 5872
differentiation of tail somite region of *Ambystoma* neural plate, 763
differentiation of tissues, significance of DNA nuclear size ratio, 718
Dissonus nudiventris, 4001
DNA synthesis in *Artemia* nauplius, 2625
effect of CO₂, in *Ranunculus* and *Myriophyllum*, 1133
effect of feeding before and after yolk absorption in *Oncorhynchus*, 844
effect of foamy jelly, *Leptodactylus prognathus*, 5090
effect of light on, in salmon, 386
eggs, Copepoda, 2634
embryogenesis of dolphin gonads, 338
eye, *Rana pipiens*, 2858
gametophyte, *Bonnemaisonia hamifera*, 4708
genicula in *Amphiroa*, 2536
gonads, *Gasterosteus*, effect of day length and temperature, 929
gonads, *Rana*, 4232
gonads, *Xenocoeloma alleni*, 5981
growth control in *Podocoryne* colonies, 641
Halicarcinus plantanus, 188
Haplostomella australiensis larvae, 4006

Development, contd.

- Hippolyte inermis, influence of temperature and sea-water, 4048
- HMPS enzymes in early *Misgurnus*, 878
- Hormophysa triquetra*, 8375
- inhibitor, *Panagrellus silusiae*, 4863
- interstitial cells in *Pennaria*, 1168
- ion transport in stomach of metamorphosing bullfrog tadpoles, 2085
- Kupffer's vesicle, *Pleuronectes*, *Gadus*, 6581
- larval, of *Pisoides edwardsi* in the laboratory, 1270
- lateral musculature in *Brachydanio*, 864
- Leuciscus cephalus*, 413
- Macrobrachium rosenbergii*, 2650
- mantle organs, feeding, and locomotion in *Macoma balthica*, 255
- metabolic gradients and morphological polarization in hydroid polyps, 635
- metamorphosis in *Ascidia malaca* in seawater lacking SO_4^{--} , 284
- morphogenesis, *Ulva mutabilis*, 6776
- morphology, *Melobesia mediocris*, 4714
- neurocranium, *Leucaspis delineatus*, 8909
- Opisthoterus tardoore*, 4332
- oral development, *Tetrahymena pyriformis*, 6863
- Pediastrum boryanum*, cell walls, 1781
- Penaeus schmitti*, 2654
- pilidium larvae, Sweden, 2600
- polychaete larvae, 144
- Polydora* spp., 2616
- Ranatra linearis*, 1961
- regeneration and adventive embryony in *Fucus vesiculosus*, 1066
- regeneration of cirri, *Nereis diversicolor*, 6930
- sea urchin, 7907
- sea urchin, biosynthesis of nuclear proteins, 2036
- sea urchin, dactinomycin effects, 2831
- sea urchin, sulphate deficiency and IBA effects, 2830
- secondary sexual characteristics, *Hemicentrotus pulcherrimus*, 6178
- shock treatment of eggs, *Limnea*, 5008
- single cells, Chlorophyceae, 4686
- Spirula spirula*, 2815
- supernumerary pereopods, *Porcellio dilatatus*, 4964
- Terebratulina*, 2841
- Trypanosoma canadensis* in *Placobdella*, 1151
- Turaniella vitrea*, 8458
- venous system in *Polypterus senegalus*, 468
- zoospore vesicle, *Bulbochaete hiloensis*, 6753
- Dexaminiidae**, biotopes, recognition, West Europe, 3410
- Dexaminoides** sp., Gulf of Mannar and Palk Bay, 4028
- Diacria quadridentata** f. *danae*, Atlantic, 2751
- Diacronema vlkianum**, structure and ultrastructure, 540
- Diacyclos** sp., 3997
- Diadema**, Curacao, Netherlands Antilles, 3791
- Dialommus fuscus**, eye anatomy and histology, 4405
- Diamesa campestris**, River Supraśl, Poland, 1952
- Diamesini**, Fennoscandinavia, 4985
- Diamines**, algicidal, 2484
- Diapause**, Nematoda, 7691
- Diaphanoeca grandis**, 5853
- Diaphanosoma brachyurum**, Kiev reservoir, 3982
- Diaphanosoma excisum**, 8540
- Diaphus**, 5442, 8039
- Diaphus garmani**, ecology, Christmas Island, 7390
- Diaptomus**, 3979, 4895, 5408, 6606
- Diaptomus connexus**, distribution, Alberta, Saskatchewan, 3998, 4895
- Diaptomus intermedius** sp.n., 3999
- distribution, Saskatchewan, 4896
- Diaptomus oregonensis**, grazing rates and food selection, British Columbia, 4000
- Diaptomus pallidus**, 6654
- Diastylis rathki**, 5545
- Diatomaceae**, 3807, 5497, 6616, 7467, 8267
- amino acid from cell walls, 21
- Andorra, 5648
- associations, South Africa, 5657
- Australia, 5649
- Barra das Jangadas, Brazil, 1765
- boom, Black Sea, 4485
- cell size hypothesis, 5668
- distribution, West Indian Ocean, 5654
- ecology, Jutland, 6739
- ecology, Mysore, 5653
- ecology, rocks and walls, 5660
- ecology, South Africa, 5657
- electron microscopy, 5659, 7496
- Galapagos islands, 5655
- growth and root production, *Parotocelis*, 3338
- indicators, estuaries, 1659
- Kuwait, 5651
- late-glacial fauna, Minnesota, 5647
- marine benthic, laboratory method for study, 1758
- Miocene palaeoecology, Oregon, 16
- non-marine Miocene sp., Washington, 15
- Norway, 5650
- occurrence, New Zealand, 5673
- Protoraphidaceae fam.n., 5682
- seasonal fluctuations in Lake Michigan, 1766
- shell characters used in taxonomy, 5643
- silica variations, stream populations, 4616
- taxonomy, distribution, Pacific Ocean, 5494
- Thalassia testudinum* flora, Florida, 5644
- toxicity of ammonia, 9087
- use for study of potential growth, Caribbean waters, 5670
- Diaxis asymmetrica**, 6940
- Diazona violacea**, English Channel, 6197
- Dicathais**, growth curves fitting, 7860
- Dicathais aegrota**, population ecology, Western Australia, 4119
- Diceromyzon costale**, 8608
- Diceromyonia**, 7130
- Dichromate reagent**, decomposition of, with relation to carbon estimation, 509
- Dicrateria**, 7087
- Dictyocha fibula**, 8314
- growth morphology, 4625
- Dictyocha octonaria**, 8314
- Dictyocotyle coeliaca**, oncomiracidia, 8497
- Dictyolampra**, 5662
- Dictyopteris delicatula**, 3791
- Dictyopteris membrancea**, photosynthesis and ion loss, 3838
- Dictyopteris prolifera**, tetraspores, 2545
- Dictyosiphon foeniculaceus**, 5733
- Dictyosphaerium pulchellum**, temperature and light intensity effects on growth, 4612
- Dictyostelium purpureum**, ribosomal subunit exchange,

- Dictyostelium purpureum*, contd.
7633
- Dictyota*, 6781, 8373
ecology, Tanzania, 8373
- Dictyota dichotoma*, 8278
effect of micronutrients, 2480
- Dictyuchus*, 7584
growth on amino acids, 5805
- Dicurella*, taxonomy, 1804
- Dicymennea eltanini*, Antarctic, 5928
- Dicymennea kaikouriensis* sp.n., 5927
- Dicymennea rostrata* sp.n., 5927
- Didelta*, keys, Gulf of Lions species, 3952
- Didemnopsis translucidum* sp.n., Glenan Archipelago, 4208
- Didymocystis scomberomori*, 4851
- Dieldrin*, uptake by isolated *Salmo* gills, 981
- Differentiation**, see **Development**.
- Diffugia corona*, 7626
- Diffugia elegans var parva* var.n., Iceland, 3316
- Digenea*, Bermuda, 8488
- Digenia simplex*, 6714
- Digestion**, (see also **Food**)
cyclic activity in diverticula, *Lasaea rubra*, 7884
- Dinophilus gyrotilatus*, 136
effect of temperature on rate, *Ictalurus punctatus*, 5341
- Haliotis rufescens*, 6111
molasses distillery wastes, 4547
- Rana catesbeiana*, 7978
- Digestive enzymes**,
Arenicola marina, 2603
Blepharisma intermedium, 95
Bufo regularis, 7153
- Digestive system**,
Asplanchna sieboldi, 5923
Belostoma indicum, 1950
Echiurus echiurus, 2609
hydrolytic enzymes in digestive gland of molluscs, 259
Thyone briareus, intestinal absorption and transport, 2034
Thyone briareus, sugar transport, 2035
Toxoglossa, 233
ultrastructure of tubules, *Cerastoderma edule*, 7076
- Dihydrofolate reductase**, comparative studies, 3186
- Dileptus**, responses to mechanical stimuli, 7634
- Dileptus anser*, 6831
- Dileptus cygnus*, ultrastructural modification at regeneration, 3882
- Dinema* spp.n., Lithuania, 6841
- Dinema harpacticolens* sp.n., parasites, Poland, 6842
- Dinema mazuriense* sp.n., parasite, Poland, 7547
- Dinema ocelli*, parasite of Copepoda, 159
- Dinema semiparasiticum* sp.n., parasite, Lithuania, 6844
- Dinema symmetricum* sp.n., parasite, Poland, 6845
- Dinema trakayense* sp.n., parasite, Lithuania, 6846
- Dinema unispicatum* sp.n., parasite, Lithuania, 6846
- Dinamina ocelli* gen. et sp.n., parasite, Lithuania, 6847
- Dineutes carolinus*, swimming, wave-making, 1953
- Dinichthyidae*, fossil, Devonian, Iowa, 6553
- Dinocras cephalotes*, 4515, 7015
- Dinoflagellata**, 7434
bioluminescent, photometer for mapping, 1802
British Columbia coast, 3842
continuous measurement of chlorophyll, 66
distribution, Cuba, 6796
division rates, 4745
North Sea, 1080, 1081
nutritional relationship with *Anemonia sulcata*, 3915
relation to marine habitat, Straits of Florida, 5755
settling rates, 4745
Straits of Florida, 5755
- Dinophilus**, 4798
sex determination, 2622
- Dinophilus gyrotilatus**,
feeding and digestion, 136
ovary and oogenesis, 2608
sex determination, 7703
sex ratio, 1192
- Dinophyceae**, 3192
from a boring, Ypres, 8391
S. India, 22
ultrastructure, theca, 4728
- Dinophytes**, 3322
- Dinorthis**, 7130
- Dinosoma manter* spp.n., 2584
- Diodon**, 5222
- Dioecotaenia cancellata** gen. et comb.n., parasite of *Rhinoptera bonasus*, Chesapeake Bay, 5895
- Diogenella**,
keys, 7728
parasite of *Holothuria*, West Indies, 7728
- Diogenella deichmannae**, 7728
- Diogenella impar**, 7728
- Diogenella seticauda**, 7728
- Diogenella spinicauda**, 7728
- Diogenes bicristimanus**, effect of temperature and salinity on heat tolerance, 688
- Diogenes miles**, cytoplasmic inclusions in spermatozoa, 1242
- Dioithona**, 7724
- Diopatra cuprea*, temperature tolerance, 3344
- Diphylobothrium**, plerocercoids in *Gasterosteus aculeatus*, 2588
- Diplanthera wrightii**, survival and growth when transplanted under artificial conditions, 85
- Diplectanidae**,
ecology, Gulf of Lion, 7680
key, Gulf of Lions species, 3940
- Diplodiscus lali** sp.n., from *Rana tigrina*, 1865
- Diplodiscus subclavatus**, structure and secretory activity of intertestinal epithelial cells, 5896
- Diplodus annularis**, 7267
- Diplogaster**, 4861
- Diploidy**, amphigony, *Artemia* DNA, 663
- Diplolaimella ocellata**, 7690
- Diploneis**, 5651
- Diplosoma singulare** sp.n., Glenan Archipelago, 4208
- Diplostauron elegans**,
ecology, 8355
general biology, 6765
- Diplostomatidae**, 3941
- Diplostomulum huronense**, 6518
- Diplostomum flexicaudum**, parasite of *Lymnaea catascopium*, 8657
- Diplozoon paradoxum**, in *Rutilus* and *Abramis*, 2589
- Diplura simulans** gen. et sp.n., California, 4699
- Diptera**, 6612
chemical control, 4080
- Diquat**, levels in estuarine molluscs, water and mud, 741
- Discarding practices**, shrimp fisheries, 2686
- Discias exul**, distribution, Great Barrier Reef, 7760

- Discoglossus pictus*,
cell transplants, 5086
transplantation experiments, 4219
- Discoaster challengerii*, 7423
- Discoaster deflandrei*, 7423
- Discoaster gemmifer*, 7423
- Discodeles malukuna* sp.n., Solomon Islands, 2853
- Discophyra*, occurrence on *Argyronecta aquatica*, 6837
- Discophyra piriformis*, 3901
- Discorbis*, regeneration of new test, 98
- Discroerisma psilonereia* gen. et sp.n., 3842
- Diseases, (see also Parasites)**
5569, 5970, 7567
- Achyla, *Perca*, *Salmo*, 6516
- aerocystis in carp, 868
- aerocystis in carp, pathology and therapy, 869
- Aeromonas salmonicida*, *Oncorhynchus* spp., 7279
- aflatoxicosis, *Oncorhynchus kisutch*, *Salmo gairdneri*, 4328
- anomaly P, *Rana esculenta*, 7167
- aquaria source of *Mycobacterium* skin infection, 2550
- bacillary necrosis, *Crassostrea*, *Mercenaria*, *Vibrio*, 6137
- bacteria, inflammatory lesions, *Alosa sapidissima*, California, 4313
- bacterial epidemic in frogs, 1814
- Balanus, New York, 4901
- 'bald spot' disease, Loch Lomond, *Coregonus lavaretus*, 5265
- bilharzia, Volta Lake, 3090
- blue-green algal virus, 8293
- botulism, type E bacteria, 1816
- botulism, water fowl, California, 8814
- botulism, water fowl, Kern River, 3543
- carp, control, USSR, 4366
- carp, fish farms, USSR, 4370
- characteristics of *Gaffkya homari*, causative agent of lobster gaffkemia, 191
- cholera, Kedah River, 8405
- Clostridium botulinum* toxin, smoked fish, 8895
- Columnaris*, *Chondrococcus columnaris*, aquacultural, 5432
- Crassostrea virginica*, 4765
- cystic fibrosis, characterization of inhibitor, 5014
- cystic fibrosis, inhibition of motility of gill cilia of *Dreissensia* by plasma of patients, 6138
- dactylogyrosis, control, neguvon, 3641
- Dermocystidium granulatum* sp.n., 6812
- encephalitis, Sarawak, 7830
- Epitheliocystis*, *Lepomis macrochirus*, 3661
- fibroma, *Oncorhynchus tshawytscha*, 3614
- fish, Asia and Far East, 3573
- fish, Near East and Africa, 3571
- fish, North Africa, 3572
- fish, warm-water pond, Europe, 3570
- fungal disease, *Astacus astacus*, Western America, 4031
- gaffkemia in *Homarus*, 691
- "gill disease", *Crassostrea angulata*, 733-740
- gill disease, *Thanaosirea polymorpha*, 7068
- haematopoietic virus, *Salmo*, *Oncorhynchus*, 2981
- Hartmannella tahitiensis sp. cause of death of *Crassostrea commercialis*, Tahiti, 7078
- hepatitis, *Anguilla*, 5433
- hepatitis, clam-associated, 2810
- hypercalcaemia effects on acrosome, starfish, 7108
- Ichthyophthirius multifiliis*, control, carp, 3645
- Ichthyophthirius*, population control, 3319
- IHN, *Oncorhynchus nerka*, 8102
- immunization, duck, against virus enteritis, 8017
- immunization, hepatitis virus, duck, 8018
- immunization, Pekin duck, 8017
- infectious gill necrosis, carp, Poland, 3640
- infectious pancreatic necrosis, Salmonidae, 5300
- infectious pancreatic necrosis, Salmonidae, Canada, 5299
- influence of temperature on gaffkemia, 1252
- IPN virus in *Salmo pancreas*, 855
- iron salts, Pisces, 8943
- kidney, *Oncorhynchus* spp., Lake Michigan, 4327
- Lucilia*, Anura, 7152
- lymphocystis, *Roccus saxatilis*, Chesapeake Bay, 8182
- lymphocystis, wounds providing entry for lymphocystis infection in blennoids, 895
- macrocytic anaemia, *Salvelinus fontinalis*, 7293
- melanomas, hybrids, 4467
- melanomas, platyfish-swordtail hybrids, 8157
- meningo-encephalitis, 3863
- Microsporidia, Pisces, 8082
- microsporidial infection of *Parophrys vetulus*, 939
- murres, California, 3545
- Mycobacterium marinum*, 4759
- neoplasms and related disorders, *Paramecium*, 3896
- of fish, genetic methods of combating, 872
- papilloma, *Anguilla vulgaris*, 4441
- papilloma on siphon, *Tresus nuttallii*, 8683
- papilloma, *Parophrys vetulus*, 4466
- parasitism of man by nematodes, 3950
- parasitism of *Molva molva*, 3950
- PCDV, *Rana pipiens*, 8774
- Phythium*, *Porphyr*, 7588
- Pistia stratiotes*, Nigeria, 6827
- plague, aves susceptibility, 7209
- poliovirus behaviour in sea-water, 8422
- Porphyr*, culture, 3279
- Posthodiplostomum, *Lepomis macrochirus*, 3662
- primary mycosis in *Palaemonetes kadiakensis*, 195
- Pythium marinum*, *Porphyr*, 7549
- resistance to crayfish plague, 1234
- Rimaccephalus arecepta* sp.n. (Tricladida), Baikal, 6907
- Salmo gairdneri*, 4333
- salmon, 8892
- Salmonella, 6340, 9092
- Salmonella, Gulf of Aarhus, 3300
- Saprolegnia, control, *Salmo salar*, 7291
- Saprolegnia ferax*, *Perca*, 6516
- Schistosoma mansoni*, 7686
- schistosomiasis, control, 5009
- survival of human pathogens in sewage, 3753
- swim bladder, *Cyprinus carpio*, 3639
- Ulcerative Dermal Necrosis, *Salmo salar*, 7290
- Ulcerative Dermal Necrosis, Salmonidae, British Isles, 4343
- viral, *Oncorhynchus kisutch*, 4325
- viral, susceptibility, Pimephales, 3648
- viral, *Stizostedion vitreum*, 4433
- virus LT-1, ovary cells, *Salmo gairdneri*, 8105
- virus 3, restricted replication, frog, 8801
- whirling disease, *Salmo*, 2983
- wounds providing entry for lymphocystis infection in blennoids, 895
- Dispersal,**
Arctocorisa and *Callicorixa* in Finland, 1947
- microorganisms by *Lethocerus uhleri*, 2720

Dispersal, contd.

- Parastenocarididae in Northern Europe, 1219
upstream movements of insects, Swedish streams, 1963
wild and hatchery-reared *Salmo*, 850
- Dissolved gases,**
oxygen, carbon dioxide, effect on schooling behaviour, *Engraulis mordax*, 6391
oxygen resources, 6640
- Dissolved nutrients,** Columbia River, 9060
- Dissonus nudiventris,** hatching and larval development, 4001
- Dissorophidae,** relationship, Trematopsidae, 5087
- Dissostichus,** blood plasma proteins, Antarctica, 4310
- Dissostichus mawsoni,** heat labile aldolase, 5421
- Distribution, (see also Vertical distribution)**
5970, 5971, 6230
Acanthacartia seshaiyai, Vellar Estuary, India, 5954
Acanthaster planci, Indo-Pacific, 7914
Acanthochiton communis, Mediterranean, 3493
Acantholiparis caecus sp.n., 430
Acanthopagurus, Indo-Pacific, 4036
Acanthosphex leuynnis, India, 4396
Acartia bilobata, India, 3355
Acetropus niveus, Poland, 4981
Achrochaetium godwardense sp.n., India, 7536
Acipenseridae, helminthofauna, Holarctic, 5428
Acritarcha, Ypres, 8391
Acrothoracica, 4016
Adineta oculata, Czechoslovakia, 4864
Aedes (Mucidus) spp., Africa, 8616
Africophilus spp.n., Malawi, Nigeria, 8619
Alcyonium pacificum, Akkeshi, 6891
algae, Ardenne marsh, 3192
algae, Argyll, Scotland, 8279
algae, Bay of Fundy, 4580
algae, Crapina-Jijila lake, 3708
algae, Florida, 5617
algae, Kinu-numa, 3195
algae, Lake Tiberias, 3221
algae, N. American Atlantic coast, 6
algae, Okinawa, 3194
algae, postglacial lakes, UK, 5627
algae, Somerset, 3191
algae, Tanzania, 3254
algae, Washington, British Columbia, 6725
Algites enteromorphoides sp.n., Devonian, Missouri, 5691
altitudinal, of fish in a South Platte River tributary, Colorado, 861
Amphibia, Afghanistan, 5067
Amphibia, Baltic coast, 8743
Amphibia, Southern Aegean Islands, 6230
Amphibia, Trinidad, 7146
Amphibia, Venezuela, 5065
Amphipoda, Greenland, 7745
Anarchias grassi, Madeira, 9024
Anarrhichas orientalis, Japan, 6490
Ancylidae, 8647
Anomura, Waltair Coast, 6978
Anoplopoma fimbria, Sea of Okhotsk, 7349
Antithamnion, Japan, 5737
Aphanizomenon flos-aquae, Oregon, 4611
Apherusa, West Coast, Istria, 4029
Aponogeton, Australia, 4782
Appendicularia, North Atlantic, 6201
aquatic plants, Baltic shore, 4776
Archaeogastropoda, Hardanger fjord, 7026

- Archaeogastropoda, Lake Baikal, 7030
Arctocepalus, Australia, 3547
Argasilus auritus, Newfoundland, 4897
Argentina spp, Peru, 8898
Arion lusitanicus, Germany, 7029
Arvicola terrestris, 7212
as effected by reduced salinity, in *Chorda filum* and *Saccorhiza polyschides*, 1065
Ascidia, Gulf of Gascogne, 7938
Asciadiaceae, Baltic, 5060
Asciadiaceae, English Channel, 6197
Ascocotyle paratenuicollis sp.n., 3938
Ascomycetes, New England, 8419
Aspidogaster conchicola, Romania, 8492
Astasiaceae, Euglenophyceae, North East China, Brazil, 7546
Asterionella formosa, 5663
Asterocheres jeanyeatmanae sp.n., Chesapeake Bay, 5956
Atheresthes stomias, Sea of Okhotsk, 7349
Atherina mochon, Dutch coast, 6550
Athiorhodaceae, swamps, 7574
Atractolytosticus huronensis, 5885
Auchmeronema, Africa, 4862
Aulacocephalus temmincki, Andaman Sea, 4399
Aves, Vistula River, 7205
Avrainvillea, Japan, 5694
Bacillariophyceae, Cayler Prairie, 5645
bacteria, Aral Sea, 5784
bacteria, Bay of Naples, 5790
bacteria, Gulf of Trieste, 7565
bacteria, Louisiana, 7566
bacteria, Mediterranean, Black and Red Sea, 5769
bacteria, Tyrrhenian Sea, 5791
bacteriofauna, Iceland-Faroe Ridge, 4751
bacterioplankton, Lake Balaton, 7563
Balaena mysticetus, Osaka Bay, 8838
Balanus amphitrite, Netherlands, 3368
Balanus improvisus, North America West Coast, 4017
Balanus tintinnabulum clippertonensis, Mexico, 4903
Bangia aturpupurea, Lake Erie, 6785
Bathyclupea argentea, 924
Bathylaconidae, Atlantic Ocean, 8901
Batillipes sp.n., California, 3433
Batrachia, Madagascar, 3509
Batrachylodes, Solomon Islands, 6209
benthic algae, British Isles, 4578
benthic Copepoda, brackish, Germany, 4891
benthic heterotrophic bacteria, 5772
Benthopecten spp.n., New Zealand, 4181
benthos, Barents Sea, 5542
benthos, Lübeck Bight, 5545
benthos, Sea of Okhotsk, 4958
Blenniidae, Indian coast, 8163
Blenniidae, Ligurian Sea, 5390
Blennius semifasciatus, Indian coast, 8164
Boldia angustata sp.n., Alabama, 4707
Bomolochidae, Caribbean, 6943
Bomolochus jonesi sp.n., 3990
boring organisms, Newfoundland, 4054
bottom fauna, Great Australian Bay to New Zealand, 6634
Bowmaniella spp.n., Bahamas, 6963
Brachinecta acanthopenes sp.n., 3352
Brachycoelium salamandrae in Corsica, 3939
Branchiostoma lanceolatum, Pulicat Lake, 4202
Branchipus alpinus, Piedmont, 4884

Distribution, contd.

- Bryozoa, Antarctica. 6185
- Bryozoa, Brazil, central Africa. 5056
- Bryozoa, Ectoprocta, India. 4191
- Bryozoa, German marine and brackish waters. 8724
- Bryozoa, Isle of Man. 5057
- Bufo spp., Florida, Pleistocene. 6216
- Calanoida, abyssal zone, Atlantic. 8544
- Calanoida, Pacific Ocean. 4888
- Calanoides philippinensis, South China Sea. 3991
- Calanus, Pacific. 3356
- Calanus, Sea of Japan. 6944
- Calliactis polypus, Dardanus gemmatus, Hawaii. 5862
- Calliblepharis jolyi, Brazil. 5738
- Callionymus nasutus, Australia. 8984
- Capnopsis, Europe. 7005
- Capnopsis, Germany. 7005
- Candacia samassae, Arabian Sea. 3994
- Caridea, Indian Ocean. 8560
- Caristius groenlandicus, Northwest Atlantic. 4445
- Castor, Virginia. 7215
- Ceramium, Tanzania. 8381
- Cerastoderma edule, Sea of Azov. 6133
- Ceratites, Upper Cretaceous, Germany. 7092
- Cetacea, California. 7218
- Chelonia mydas, western Indian Ocean. 4251
- Chiridota peloria, Brazil. 6172
- Chironomidae, Nearctic. 3423
- Chironomidae, Yugoslav Danube. 3422
- Chirostylidae, Galatheidae, East China. 8559
- Chitonida, Taiwan. 7105
- Chlamys islandica, Norway. 5016
- Chlorophyceae, India. 6742
- Chondracanthus narium sp.n., British Columbia. 3996
- Chrysaora quinquecirrha, York River, Va. 118
- Chrysopaerella multispina, Sweden. 8312
- Chrysophyceae, Indo-China. 3213, 7493
- Chrysophyceae, Natal. 3212
- Chrysophyceae, New Zealand. 8317
- Chrysophyceae, swamp, Ardenne. 7494
- Chrysophyceae, Sweden. 8312
- Cidaroidea, Gulf of Mexico. 4175
- Ciliata, Caspian Sea. 6830
- Cirripedia, Japan. 4900
- Citharichthys spp.n., North Atlantic. 7388
- Cladocera, subfossils, Lake Balaton. 6937
- Clarias albopunctatus, Chad. 8134
- Clinidae, South Africa. 8162
- Clostridium oceanicum sp.n., Atlantic sediments. 8413
- Clupea harengus, Maine. 6384
- Cnephia, Prosimulium, Maryland. 6072
- Cobitis aurata, Europe. 4362
- Cobitis granoei olivai, Mongolia. 6451
- Cobitis larvata, Italy. 7311
- Coccolithophorida, Marseilles. 3812
- Coleoptera, Norway. 8614
- Coleoptera, tropical Africa. 2711
- Cololabis saira, Pacific. 8046
- Collotheca brevicilata, Czechoslovakia. 4865
- Conchoecia spp., North Atlantic. 3419
- Conus sugillatus, Hawaii. 7855
- Conus varius, Western Samoa. 7856
- Copelatus, Suphisellus, California. 6074
- Copepoda, Bermuda. 3360
- Copepoda, Black Sea. 3989
- Copepoda, Chile. 4002
- Copepoda, New Zealand. 3364
- Copepoda, Saskatchewan. 3999
- Copepoda, western Mediterranean. 4014
- Corals, New Caledonia. 3327
- Corbicula, Baja California. 7880
- Coregonus baderi sp.n., Brazil-Surinam. 6453
- Coryphella fusca, Okhotsk and Bering Seas. 7037
- Cottus, Lake Tahoe. 3655
- Crangon crangon, Kiel Bight. 4920
- Crenimugil labrosus, Rana fjord. 5440
- Crustacea, Florida. 4024
- Crustacea, Greenland. 7739
- Crustacea, Netherlands. 3351
- Crustacea, Saskatchewan. 3999
- Cryptothyrella, Ohio, Kentucky. 6194
- Ctenopharyngodon idella, Czechoslovakia. 6454
- Ctenocladus, British Columbia. 8354
- Cumacea, Greenland. 7740
- cyanophage. 3207
- Cyanophyceae, Argentina. 4604
- Cyanophyceae, Iceland. 4605
- Cyathura carinata, Norway. 8575
- Cyclastraea meltensis, Bulgaria. 8469
- Cyclopoida and Harpacticoida, North Italy. 3997
- Cyclopoida, Indian Ocean. 5952
- Cymatium ranzanii, Kuria-Muria Islands. 7859
- Cymopolia, Pyrenees. 5720
- Cynoscion macdonaldi, Gulf of California. 5393
- Cypraeidae, Red Sea. 2749
- Cypridinae, Canada. 4975
- Cyprinion spp, West Pakistan. 5331
- Cyprinodon, Netherlands Antilles. 7389
- Cyprinodontidae, Louisiana. 6544
- Dasyatis centroura. 352
- Dasycladales. 3828
- Dendrophyllia minuscula from the Andamans. 3936
- Derilissus, Western Atlantic. 4448
- Dermatobranchius walteri, Spitzbergen, Greenland, Norway. 7038
- Dermochelis coriacea, La Coruna. 5143
- Derocheilocaris ingens sp.n. 4096
- Deronectes canaliculatus, Denmark. 8623
- Diamesini. 4985
- Diaptomus connexus, Alberta, Saskatchewan. 4895
- Diaptomus intermedius sp.n., Saskatchewan. 4896
- Diaptomus, North America. 3998
- Diatomaceae, Andorra. 5648
- Diatomaceae, Australia. 5649
- Diatomaceae, Bay of Concepcion, Chile. 3807
- Diatomaceae, Kuwait. 5651
- Diatomaceae, Jutland. 6739
- Diatomaceae, Lesotho. 5658
- Diatomaceae, Montana. 5646
- Diatomaceae, Mysore. 5653
- Diatomaceae, New Zealand. 5673
- Diatomaceae, Norway. 5650
- Diatomaceae, South Africa. 5657, 5658
- Diatomaceae, West Indian Ocean. 5654
- Dictyota, Tanzania. 8373
- Dicyemenea eltanini sp.n., Antarctic. 5928
- Dicyemenea, New Zealand. 5927
- Didemnidae, Glenan Archipelago. 4208
- Dinema spp.n., Lithuania. 6841, 6846
- Dinema harpacticolens sp.n., Poland. 6842
- Dinema metabolicum sp.n., Copepoda, parasite, Lithuania. 6843
- Dinema semiparasiticum sp.n., Lithuania. 6844
- Dinema symmetricum sp.n., parasite, Poland. 6845

Distribution, contd.

- Dinoflagellata, Cuba. 6796
 Dinoflagellata, freshwater, Cuba. 8390
 Dinophyceae, Ypres. 8391
 Dioecotaenia cancellata gen. et com.n. 5895
 Discias exul, Great Barrier Reef. 7760
 dispersal, Parophrys vetulus, Washington coast. 6576
 Dolichodorus heterocephalus, in the littoral zone of Lake Champlain. 1186
 Draparnaldia, Lake Champlain. 4668
 Drepane spp, India. 8154
 Dugesia, Brazil. 6901
 Dugesia indica sp.n., India. 3943
 Dynamene, Afro-Europe. 6969
 Echinodermata, Spain coast and Gulf of Gascogne. 7906
 Echinogammarus spp.n., Italy, Switzerland. 3390
 Echinoidea, Hatakeziama Island. 4177
 Echinoidea, New Zealand. 4189
 Echinoidea, Spain. 7107
 Ecnomus spp.n., Congo. 3424
 Ecnomus tropicus, Congo. 4103
 ecology, Crenobia alpina, Europe. 6899
 ecotopes of Polychaeta. 6921
 effect on reproductive physiology, Aequipecten irradians. 6872
 Elaphoidella rodrigensis, Rodrigues. 6947
 elasmobranchs, Georgia. 4295
 Eleutherodactylus, Antilles. 7158
 Enchytraeidae, Romania. 8523
 Engraulidae, Indian Ocean. 4354
 Enoplometopus antillensis, Brazil coast. 3392
 Enoplometus callistus sp.n., Gulf of Guinea. 7763
 Enterobacteriaceae, Danube. 3297
 Enteromorpha, Korea. 3237
 Entocytheridae, Kentucky. 6063
 Entocytheridae, New Guinea. 4093
 Entomostraca. 3979
 Eolidacea, Tanzania. 7843
 Ephemeroptera, South Africa. 8608
 Epibulus insidiator, India. 8168
 Epinephelus malabaricus, Goa coast. 8148
 Epinephelus melanostigma, Ryukyu Islands. 6488
 Eptatretus deani, British Columbia. 4286
 Erpobdella, North America. 4873
 Eschrichtius robustus, Japan. 8844
 Esox, South Africa. 5271
 Etheostoma trisella, Tennessee. 7357
 Eucarida, Scilly Isles. 4905
 Euchirella and Pseudochirella, Izu region. 4005
 Euglenophyceae, temporary basins, Bulgaria. 8392
 Eukrohnina minuta sp.n., Indian Seas. 7930
 Eumecichthys fiski, Pacific and Indian Oceans. 9030
 Euphausiacea. 6016
 Euphausiacea, Cape Verde islands. 7747
 Eurydice spp., intertidal, British Isles. 6970
 Eurypharynx pelecyanoides, Hispaniola Basin. 6554
 Euthynnus affinis, Hong Kong. 6538
 Evadne nordmanni, western Mediterranean. 3987
 evolutionary divergence, Bufo, Australia. 6254
 Exanthemachrysis gayralii gen. et sp.n., France. 3219
 Excirolana spp, Atlantic. 4927
 Exocoetidae, Indian Ocean. 9015
 extensions of known northern range of Caulolatilus princeps and Paralichthys californicus. 431
 fauna, Norway. 5604
 Feresa attenuata, southern Africa. 6304
 Flagellata, Arctic. 4633
 flamingo, Tomales Bay. 8827
 flora, Mediterranean. 7606, 7607
 Fluviphylax pygmaeus, Amazon. 6555
 Foraminifera, Antarctic Ocean. 4801
 Foraminifera, Barbados. 6834
 Foraminifera, Brazil. 8445, 8446
 Foraminifera, Canada continental shelf. 8444
 Foraminifera, Isles of Scilly. 7625
 Foraminifera, New Zealand. 4800
 Foraminifera, North Dakota. 5839
 Foraminifera, Pacific. 5511, 6835
 Foraminifera, Persian Gulf. 3884
 fossil, Mollusca, Kansas. 7060
 freshwater algae, British Columbia. 6727
 freshwater gastropods, Madagascar. 4113
 fungi, British Columbia. 6815, 6816
 fungi, Colorado. 7579
 fungi, Japan. 4767
 Gadus morhua, Arkona Sea and Mecklenburg Bay. 5377
 Gadus morhua, Bornholm and Arkon basins. 5376
 Gadus morhua, Bornholm Basin. 5373
 Gadus morhua, spawning population, Bornholm Basin. 5373
 Galatheididae, Japan. 8558
 Galaxiidae, New Zealand. 8193
 Gammarus lacustris. 2645
 Gammarus lacustris, Norway. 4929
 Gammarus, open ocean. 7765
 Gammarus pecos sp.n., Texas. 4928
 Gastropoda, Anatolia. 7025
 Gastropoda, Eastern Pacific. 7040
 Gastropoda, southeast Asia. 7035
 Gastrotheca garcilis sp.n., Argentina. 6225
 Genicularities articularis gen. et sp.n., Germany. 4882
 geographical and seasonal, Calanus finmarchicus, North Atlantic. 7429
 Glaucidae, Australia. 8655
 Globicephala melaena, Genoa. 5155
 Globorotalia menardii, Indian Ocean. 7636
 Glyceria aquatica, Bohemia. 6822
 Gnorimosphaeroma salebrosa sp.n., Japan. 3412
 Gomphidae, South America. 7001
 Gonatopsis octopedatus, Japan Sea. 7096
 Goniasteridae, Straits of Florida. 6177
 Grateloupia dichotoma, Black Sea. 4712
 gulls. 8019
 Gymnogongrus norvegicus, Mediterranean. 7540
 Halargyreus johnsonii, New York Bight. 8149
 Halicarcinus lacustris, Australia. 4046
 Halicarcinus platanus. 188
 Haliotis midae, South Africa. 3442
 Halodule emarginata, Brazil. 7603
 Hamopontonia gen. et sp.n., Indo-Pacific. 3396
 Harpacticoida, Czechoslovakia. 161
 Harpacticoida, eastern Mediterranean. 4003
 Harpacticoida, North Sea mud flats and salt marshes. 4889
 Harpacticoida, Scilly Isles. 4887
 Haustorius arcnarius, Netherlands. 3413
 Helobiae. 5807
 Herpetocypris, Portugal. 8606
 herring, Iceland. 5233
 Heterocyclopina. 4007
 Heteroptera, Antilles. 7004

Distribution, contd.

- Heteroptera, Poland. 6080, 6081
Heteroptera, Portugal. 3425
Hexagenia limbata, California. 4989
Hexagenia limbata, California reservoir. 6082
Hippolytidae, Provence. 4049
Hirudinea, Colorado. 3345
Histiotethidae, North Atlantic. 3484
Holacanthus venustus, Japan. 6499
Holothuroidea, New Zealand. 8701
Hutchinsoniella macracantha, Brazil. 7811
Hyalinoecia, North America. 6927
Hydracarina, India. 6092
Hydrobiinae, Swiss caves. 7845
Hydromantes spp. 4990
Hydromantes spp., Appennines. 6226
Hydromedusae, Barents Sea. 3331
Hyla lascinia sp.n., Venezuela. 5089
Hyperglyphe perciformis, Atlantic Ocean. 8173
Hyperoodon ampullata, Nova Scotia. 6306
Hyperprosopon anale, Oregon. 3659
Hyphomycetes, Florida. 7582
Hyphomycetes, Wisconsin. 7581
Hypophthalmichthys molitrix, Danube, Czechoslovakia. 6466
Idotea metallica, Norway. 8575
Inoceramus, Cretaceous, Holarctic. 7883
Insecta, Lake Chad. 3427
interstitial fauna, Andaman, Nicobar. 8439
invertebrates, relation to current speed, stream. 5533
Iris spp, Rhein. 4785
Isla Jaltimba coral formation. 4524
Isopoda, French Guiana-Amazon. 4043
Isopoda, Gulf of Marseilles. 4037
isotopes, Atlantic Ocean. 6629
Jasus tristani, Vema Seamount. 6636
Jurassic ammonites, Antarctica. 6155
Kelleria spp, Madagascar. 4898
Kirchnerielloaccus lunatus gen. et sp.n., Pakistan. 3238
Kogia, Texas Coast. 6307
Kyphosus incisor, Virginia. 7360
Lamellibranchiae, Ammonita, Lake Como. 5015
Laminariales, Mediterranean. 5734
Lampetra planeri, Czechoslovakia. 6359
larvae, Acipenser, Sacramento-San Joaquin river. 7385
larvae, Gemadas, Gulf of Mexico. 7768
larvae, Leptocephalus, Atlantic. 9014
larvae, Oncorhynchus masou, Japan. 6407
larvae, Teleostei, Brazil. 8076
larvae, Thunnus, Euthynnus, Auxis, Gulf of California. 9010
larvae, Vermetus triqueter, Marseille. 6912
Latiremox eximius gen. et sp.n., Réunion. 6949
Latirus varai sp.n., Cuba. 7864
Laurencia, Tanzania. 8383
Leander tenuicornis, Bay of Fundy. 7778
Learchis, Japan, Hawaii. 3456
Leognathus spp., Indian Ocean. 4410
Lensia zenkevitchi, Atlantic. 8472
Lepidurus arcticus, Hallingdal. 4885
leptocephalus larvae, Atlantic. 9014
Leptocuma kinbergii, Brazil littoral. 8545
Leucochloridium papillocirratum, Bohemia. 5905
Leucothoe, Gulf of Mannar and Palk Bay. 4053
Leuctra, Caucasia. 7011
Leuctridae, Caucasia. 7011
Lima excavata, subfossil, Mediterranean. 7083
Limia caymanensis sp.n., Grand Cayman. 7401
Linhomoeidae (Nematoda), Gulf of Lions. 3952
Litocorsa stremma sp.n., Scotland. 3959
littoral diatoms, South Africa. 5656
longshore, Emerita analoga, California. 7761
Lophosiphonia, Ireland. 8384
Lophotes cepedianus, Cape Peloro. 5454
Lota lota, British Isles. 7345
Lutjanus, western Atlantic. 6502
Lymnea bouilleti, Bavaria. 7042
Macellicephalus, Mediterranean. 3963
Macoma, British Columbia. 5021
Madreporaria, Banyuls-sur-Mer. 7664
Maera, Elasmopus, India. 7738
Malacanthus latovittatus, larvae, Tanabe Bay. 3704
Malapteruridae, Congo Basin. 3646
Mallotus villosus, Newfoundland. 8096
Manayunkia aestuarina. 3961
marine algae. 2486
marine algae, Canary Islands. 4585
marine algae, Caribbean Sea. 4581
marine algae, Visakhapatnam, India. 4579
marine fisheries, relation to warm water. 4395
Mastogloia lacazei, Arcachon Basin. 7498
Mayorella. 6840
medusae, Arctic Ocean. 4832
medusae, Japan. 4833
Megaloptera, Czechoslovakia. 3431
Melanogrammus aeglefinus, Arcto-Norwegian waters. 5364
Melicerita angustiloba, New Zealand. 4194
Melobesioidea, Japan. 4706
Menidia audens, California. 7404
Merluccius, Atlantic Ocean. 8978
Mesochaetopterus sagittarius, Madagascar. 3964
mesopelagic fish, western North Atlantic. 6319
mesoplankton, Southern Ocean. 4495
Micrasterias, Osaka. 3239
Microcassiope orientalis, Japan. 8594
Microhydrula pontica, Roscoff. 5875
Microna ateni sp.n., Spain. 7871
Micropterus dolomieu, Snake River. 7367
Microsiphona potamos gen. et sp.n. (Chrysophyceae) Ohio. 8316
migrations, northern fur seals, Japan. 8026
mire vegetation, Sweden. 4777
Mirounga leonina, Weddell Sea. 4261
Misgurnus anguillicaudatus, California. 3647
Mollusca, Indian Ocean. 8641
Mollusca, springs, Ancona. 7023
Monoculodes minutus, Laptev Sea. 6950
Mononema perpendiculare, Lithuania. 6853
Monoplacophora, South Atlantic Ocean. 4173
Mugil cephalus, California. 7406
Mya arenaria, Black Sea. 6143
Myodocopida, Philippine Islands. 4095
Myodocopina, Peru-Chile Trench and Antarctic Ocean. 4094
Myosotis palustris, Norway. 4794
Myriophyllum. 4789
Mysidopsis bahia sp.n., Texas. 4943
Mytilidae, South West Africa coast. 6145
Mytilus edulis, River Boyne, Ireland. 5026
Myxine glutinosa. 2939
Myxobolus, South America. 5842
Myxosoma intestinalis sp.n., fish, India. 5843

Distribution, contd.

- Myxosporidea in freshwater fish, Brazil. 5842
nannoplankton, Otway Basin. 7423
Natrix, Mexico. 6298
Naupliicola spp.n., Lithuania. 6857
Nemapterois biocellatus, Indian Ocean. 6507
Nematoda, Colombia. 7689
Nematoda, Lake Chad. 3340
Nematoda, River Po. 4861
Nematoda, Venezuela. 3340
Nereidae, Livorno. 3969
Nerillidae, South Africa. 5942
Neurymenia, southern Japan. 5748
neuston Copepoda, Pacific Ocean. 6948
new species, algae, Washington. 6726
new species, Forunculidae, Tonkin Gulf and Hainan Island. 6985
Nineo. 3971
Nineo armoricana sp.n., Gulf of Gascony. 3971
Niphargus, Italy. 4944
Nitella, Mexico and southwest USA. 4675
Notholca, Lake Baikal. 6919
Notocrangon antarcticus. 8587
Notonectidae, Antilles. 7013
Notropis ariommus and N. telescopus. 880
Noturus flavus, Hudson Bay. 4378
Nucinella serrei, Carolina. 3471
Ocypode cursor, Aegean Sea. 7787
Odonata, Malaysia. 3429
Odonata, Neuroptera and Trichoptera, Wadden Islands. 4978
Odonata, Romania. 711
Odontophrynus, Mendoza. 5093
Oligocephalus collettei, Ouachita River. 5394
Oligochaeta. 6929
Oligochaeta, Africa. 4869
Oligochaeta, Isle of Sylt. 7701
Oligochaeta, Lake Erie. 1203
Oligochaeta, Lake Vattern. 1194
Oligochaeta, lakes, Romania. 8524
Olor buccinator, Alaska. 8021
Oncorhynchus masou, Japan Sea. 7280
Oncorhynchus nerka, Alaska. 6412
Oncorhynchus spp, Adak Island. 6403
Oncorhynchus spp, Salmo, Washington. 6675
Onuxodon parvibrachium, Indo-Pacific. 6508
Ophiactis savignyi, Banyuls-sur-Mer. 4184
Ophiotrix fragilis, Devon. 7917
Ophiuroidea, Devon. 7917
Ophryodendron hollandi sp.n., Mediterranean. 7639
Opisthobranchia, Curacao. 7841
Opisthobranchia, New South Wales. 6117
Opisthobranchia, Queensland. 7024
Opisthorchis felinus, metacercariae, Caspian Sea. 8507
Oplichthys ogilbyi, Australia. 8996
Oreoleuciscus spp, USSR. 6475
organic and inorganic nutrients, Cananéia. 6646
Orthopsyllus, Norfolk. 3363
Ostracoda, Canada. 6062
Ostracoda, Isles of Scilly. 7812
Ostracoda-Myodocopa, eastern tropical Atlantic. 3986
Ostracoda, Texas. 6060
Ostracoda, Upper Senonian, Africa. 6065
Ostroumovia inkermanica, South Africa. 7672
Paguridae, Pembrokeshire. 4034
paleontological analysis, North Pacific. 3784
Pandalus montagui, Quebec. 4954, 4955
Panulirus polyphagus, Cochín. 4063
Papenfussiella, Greenland. 3260
Paragonimus westermani. 6046
Paramesacanthion, Northumberland. 5932
Parapenaeopsis tenella, India. 7795
parasites, Japan. 3353
Parastenocarididae, Northern Europe. 1219
Paratyposyllis, Prionopsis, Mediterranean. 4868
Paraxanthias parvus, Japan. 8594
Pareuglypha indica, India. 6833
Pariambus typicus var inermis on Asterias rubens, British Isles. 7796
Parona signata parasites, Argentina. 8179
Patriella regularis, Astrostele scabra, Tasmania. 4187
Penaeus, Atlantic. 6044
Penaeus, Jamaica. 4907
Penaeus, Mexico. 6045
Penaeus aztecus. 6045
Penaeus duorarum, Dahomey. 3372
Penaeus duorarum, Florida. 6042
Penaeus orientalis. 6982
Periclimenaeus spp.n., Great Barrier Reef and East Africa. 4073
Periophthalmus, India. 6511
Perotrochus beyrichii. 1996
Petroliastes teres, India. 4074
Petromyzon marinus, Gulfs of Riga and Finland. 8875
Phaeophyceae, Eastern Gulf of Mexico. 54
Phalacrostemma cidariophilum, Banyuls. 7708
Phenacovolva labroguttata sp.n., Africa. 7052
Philine exigua sp.n., Melanesia. 4130
Philineglossa marcusii sp.n., British Solomon Islands. 4131
Philometra americana, parasite of Parophrys vetulus, San Francisco Bay. 3341
Phoca vitulina, British Columbia. 3548
Phocoenoides dalli, Japan. 6311
Phoronidea, Sweden. 6187
Phoronis, Sweden. 7928
Phragmites communis, Neusiedler See. 4791
Phycomycetes. 8421
Phycomycetes, Douglas lake. 5801
Physalia, Japan waters. 3932
Physeter catodon, South Africa. 4265
Physeteris micropthalma, North Atlantic. 3375
phytobenthos, Italy. 5618
phytoplankton, as affected by physical and chemical conditions. 474
phytoplankton, Gulf of Mexico. 5495
phytoplankton, Indian Ocean. 5490
phytoplankton, Lake Balaton. 7428
phytoplankton, Ligurian Sea. 5489
phytoplankton, North Atlantic. 9048
phytoplankton, North Sea. 5488
phytoplankton, Pacific Ocean. 5494
phytoplankton, Red Sea and Gulf of Aden. 5492
phytoplankton, Spitsbergen. 5497
phytoplankton, Susquehanna River, New York. 9047
phytoplankton, White Sea. 8230
pink-pigmented bacterium, Baltic Sea. 3291
Pisces, Alaska. 6372
Pisces, Chad. 8036
Pisces, Chilka Lake. 6371
Pisces, English waters. 5164

Distribution, contd.

- Pisces, Kansas, 8080
- Pisces, Laccadives. 4303
- Pisces, Lake Erie. 7233
- Pisces, littoral environment, Ryukyu Islands. 6488
- Pisces, Lower Trias Sandstone, Karlsruhe-Durlach. 5229
- Pisces, Rangiroa. 7663
- Pisces, Scotland. 5163
- Pisces, streams, Portugal. 8860
- Pisces, Yakima River. 8038
- Pisidia, USSR. 7892
- plankton, British waters. 5482
- plankton, Caribbean Sea. 3718
- plankton, Germany. 7425
- plankton, Gotland Deep. 9044
- plankton, Irminger Sea. 5481
- plankton, Lake Quarum. 4519
- plankton, northeast Atlantic. 9043
- planktonic bacteria, Rhode Island. 5770
- Planodasyidae fam.n., India. 6913
- Platysiphonia decumbens sp.n., Washington. 3272
- Plesionika ensis, Arabian Sea. 7801
- Pollachius virens, North Sea. 5380
- Polycanthus sp.n., New Caledonia. 3330
- Polycanthus senegalensis, Caribbean. 3330
- Polychaeta, Argentina. 4867
- Polychaeta, Brazil. 3967
- Polychaeta, Mexico. 8520
- Polychaeta, Ostend. 6926
- Polychaeta, Provence. 3955
- Polydora narica sp.n., California. 4881
- Polynemidae, Indian Ocean. 4473
- Polystrata fosliei, Caribbean. 3273
- Porifera. 7659
- Porifera, Arctic and Antarctic. 6874
- Porifera, Carboniferous, Uruguay. 5855
- Porifera, Jamaica. 6871
- Porifera, Lake Moero. 6869
- Porifera, New Zealand. 4824
- Porifera, Sagami Bay. 7661
- Porifera, Upper Devonian, Alberta. 5856
- Portunidae, Biscayne Bay. 4032
- Portunus, Euphyllax, eastern tropical Pacific. 7802
- Potamopyrgus antipodum, New Zealand thermal regions. 1997
- Prionotus stephanophrys, Columbia River. 3668
- Protozoa, hot springs, Tiberias. 3317
- Protozoa, Iceland. 3316
- psammophilous ciliates, Caspian Sea. 6830
- Pseudamnicola supercarinata, Balkans. 7053
- Pseudoanemonia gen. et sp.n., New Zealand. 3280
- Pseudodiaptomus jonesi, India. 5977
- Pseudogloiothloea, Ishige, Japan. 4722
- Pseudoprotzia, Pseudatractides, Neumania, India. 6091
- Pseudostomella. 5933
- Pseudovermis mortoni, Solomon Islands and New Zealand. 4132
- Ptereleotris tricolor, Indian Ocean. 6515
- Pterosiphonia spinifera, Marseille. 3281
- Pterycombus brama subsp.n., Guinea Gulf. 7370
- Pungitius pungitius, Mogami Basin. 5469
- Pusa spp., Lake Baikal. 7224
- Pycnogonida, Crozet Island. 8634
- Pyramydomonadaceae, China. 8365
- Pyrosoma spinosum, SE Australia, New Zealand. 7142
- Pyura pachydermatina, littoral zone, New Zealand. 7126
- radiation of Cenozoic planktonic Foraminifera. 99
- Radicilingua thysanorhizans, Berre Lake. 7544
- Raja garmani, Chesapeake Bight. 4298
- Ralfsia, Nova Scotia. 4703
- Ralfsiaceae, California. 4699
- Rana arvalis, Fredrikstad. 5095
- Rana fasciculispina sp.n., Thailand. 8760
- Rana virgatipes, Florida. 7998
- range extension of Cyathura polita. 1243
- range extension of Sebastodes rubrivinctus. 909
- Rangia cuneata, east coast of America. 4161
- Raorchynchus terebra, Hawaii. 3954
- rediscovery of Puerulus carinatus, from Mozambique and off Natal Coast. 1274
- Regalecus glesne, female, Cape Province. 3700
- Regalecus glesne, Mediterranean. 5471
- Rheocricotopus, Europe. 3430
- Rhizidium tomiyamanum sp.n., Japan. 3306
- Rhizocephala, California. 4021
- Rhizocephala, Red Sea. 4022
- Rhizopsammia minuta, Japan. 8476
- Rhizosolenia styliformis, North Atlantic, North Sea. 8321
- Rhodolachne decussata gen. et sp.n., Indian Ocean. 4725
- Rimacephalus arecepta sp.n., Baikal. 6907
- Rivulus harti, California. 7419
- Rivulus maromarus, Florida, west coast. 4477
- Rogneda spp., Marseilles area. 6908
- Rotifera, peatbog, Romania. 8518
- Sagitta bombayensis, Indian waters. 4197
- Salmonella, Gulf of Aarhus. 3300
- Salpidae, West Africa. 4210
- Salpingoeca spinifera sp.n., Arctic. 4747
- Salvelinus alpinus, Quebec. 3620
- Salvelinus fontinalis. 846
- Saprospira toviformis, New Zealand. 8416
- Sarda orientalis, Ceylon. 5409
- Sargassum, Carolina coast. 3261
- Scambicornus spp., symbionts of holothurians, Caribbean. 6951
- Schimmelmanna plumosa, Ibaraki. 3283
- Schizoporella cochinchensis sp.n., Cochin Harbour. 7933
- schooling behaviour, fishes, Mid-Atlantic Bight. 6329
- Scirpus, Upper-Rhine. 3869
- Scombrobrax heterolepis, Pacific Ocean, Indian Ocean. 8999
- Scorpaena microlepis, Florida. 4427
- Scorpaenidae, Atlantic. 5412
- Scottocalanus securifrons. 4012
- Scyllarides, Gulf of California. 3394
- Scyllarus, Indian Ocean. 4084
- Scyllarus batei batei, Arabian Sea. 4085
- seasonal, Acartia plumosa, west coast of India. 5955
- seasonal, Appendicularia, Madagascar. 5062
- seasonal, Lagodon rhomboides, Texas. 4409
- seasonal, plankton, Kiel Bay. 5486
- Sebastapistes hassi sp.n., Maldive Islands. 6524
- Sebastes, Barents Sea. 5413
- Sebastes, North Atlantic. 5509
- Sebastes helvomaculatus, Gulf of Alaska. 9000
- Sebastes melanops, North Pacific. 4431
- Semisulcospira, Japan. 3453
- Serranidae, Pseudochromidae, Apogonidae, Ryukyu

Distribution, contd.

- Islands. 6488
 sharks, tuna grounds, Indian Ocean. 5206
 Silicoflagellata. 3814
Simulium ibariense, Poland. 6089
 Siphonophora, Gulf of Gabes. 3930
Siphonosoma australe, Visakhapatnam harbour. 5943
Skrjabinozoum exocoetidi, parasite of *Exocoetidae*, Red Sea. 6909
 soluble proteins, lenses, vertebrates. 7269
Spartina anglica, Denmark. 6829
 spawning, *Gadus morhua*, Bornholm Basin. 5375
 sperm whales, Antarctic. 7231
 Sphagnum, Scandinavia. 3870
Sphagnum angermanicum, Norway. 4773
Spheroides spp. 947
Spirobranchus, Caribbean. 6932
Spirorbinae, West Indies. 6933
 Spongillidae, Australia. 3910
 Spongillidae, Shikoku. 4826
 Squamariaceae, Japan. 3284
Stellicola acanthasteris, Eniwetok. 4899
Stenasellus costai, Somalia. 6049
Stenella euphrosyne, Mediterranean. 8031
Stepanoviella, India to Australia. 6193
Sternapis capillata, Brazilian waters. 3976
Stictocaro punctatus breeding colonies, New Zealand. 8828
 Stomatopoda, Atlantic. 4904
 Stomatopoda, Gulf of Tonkin. 3382
 Stomatopoda (larvae), North Sea. 6050
Strombus gibberulus complex, Indonesia. 7054
Strombus terebellatus complex. 2775
 Styelidae, Caribbean. 7139
Stylaster brunneus sp.n., New Caledonia. 6896
Suaeda maritima, Norway. 4794
 sulphur bacteria, reservoirs, South Crimea. 3308
 suspended material, Atlantic Ocean. 6642
Sympasiphaea annectens, Atlantic. 8604
Symploca codiiformis sp.n., Tyrrhenean Sea. 5641
Sympodoma hatagumoana sp.n., Sagami Bay. 4089
Synorichthys sp, Triassic, USA. 6588
Tabellaria fenestrata, Untersee, Obersee. 5496
Taenioma spp, Venezuela. 5753, 6794
 Talitridae, southern Sweden. 1276
Talorchestia brito. 6051, 6993
Taricha granulosa, Oregon. 4243
 Teleostei, Gilbert Islands. 6373
 Testacea, Romania. 8726
Tetragonurus cuvieri, Angola. 7378
Tetrasporidium, Pakistan. 7525
Thalassiosira spp, Chile and Peru waters. 5687
Thalassia, deep sea floor, N. Carolina. 83
Thespesiopsyllus paradoxus, Norway. 5979, 6953
 Thoracica, Iranian Gulf and Gulf of Oman. 4015
 Thoracica, Japan. 4900
Thunnus alalunga, Hawaii. 6540
Thysanoessa longicauda, North Atlantic. 7430
 Tilapia, Zanzibar. 3678
Tilapia coffea sp.n., Liberia. 5418
Tilapia mossambica, California. 3672
Tilapia tholloni, Stanley Pool. 5420
Tilapia zilli, Suez Bay. 3677
Tochuina tetraquetra, North Pacific. 2777
 Toheroa, New Zealand. 4137, 4138
 toxic crabs, Ryukyu and Amami Islands. 6056
 toxins, *Holothuria leucospilota*. 8719
Trachinotus carolinus, Louisiana. 6531
Trachipterus iris, Santander. 5478
Trachipterus woodi, Angola. 7378
 Trematoda, Biscayne Bay. 4851
 Trematoda, Dnieper reservoir, USSR. 3941
 Trematoda, Ivory Coast. 3944
 Trematoda, New Caledonia. 5880
 Tremogasterina, Indian Ocean. 6189
Triacnophorus crassus parasites. 7687
 Trichomycetae, France. 6814
 Trichoptera, Lithuania. 4977
Triloculina echinata, Arabian Sea. 5854
Trimmia tevegae sp.n., New Britain. 3679
Tripterygion delaisi sp.n., Senegal. 8188
Tripterygion fasciatum, Indian coast. 8164
Trypetesa lampas, British Isles. 4023
 turtles, Guiana. 3539
 Uca spp. 2701
Ulva arasakii sp.n., Japan. 6775
Ulva lactuca, Clipperton atoll. 7527
 Umbellulidae, Atlantic. 3937
Uraspis helvola, Bay of Bengal. 4436
Urceolariidae, southwest Atlantic. 6866
Urolophus paucimaculatus, Tasmania. 4293
Uruguaya repens. 8464
 Veneridae, Brazil. 7877
Vibrio, marine, Washington. 7573
Vinciguerria nimbaria, Japan. 4355
 Volvox, Europe. 7528
Wak goldmanni, Indian Ocean. 6534
 Xanthidae, West Pacific. 8562
Xiphias gladius, larvae, Western Atlantic. 4437
 yeasts, Antarctica. 3860
 yeasts in marine environment. 5799
 yeasts, Lake Champlain. 5798
 yeasts, Saskatchewan river. 5797
 zoobenthos, Mozambique Channel. 4530
 zoogeography, Gulf of Mannar. 4531
 zoogeography of Japan Sea. 4532
 zoogeography, North Atlantic. 5612
 zoogeography, Vema Seamount. 6636
 zooplankton, Baltic and Gulf of Riga. 5507
 zooplankton, Madagascar. 5510
Disturbance, Clupea harengus, Baltic Sea. 5263
Ditrema. 5188
Ditylenchus dipsaci. 7691
Ditylum brightwellii. 5500
 food for *Calanus helgolandicus*. 1884
Diurnal activity, variations of surface diatoms, Kuroshio, Japan. 8309
Diurnal rhythms,
 activity, *Anodonta cygnea*. 7067
 activity, *Bufo viridis*, Lake Issyk-kul'. 8753
 behaviour, *Anodonta cygnea*, Unio. 7071
 behavioural role photoresponse, *Gyrodinium dorsum*. 7558
Bufo, spawning. 2872
 chromatic phenomena, *Hippolyte* varians. 8581
 endogenous light-on rhythm, *Lemna gibba*. 7604
Esox, *Coregonus*, *Stizostedion*, *Catostomus*, Lake Heming. 4319
Halichoerus grypus. 5157
 heat resistance, *Acris crepitans*. 3502
Hemigrapsus edwardsi, New Zealand. 3397
 nutrition, *Leuciscus cephalus*. 8964
Octopus cyanea. 8694
Oncorhynchus, Okhotsk Sea. 2974
Penaeus semisulcatus. 7800
 primary production. 8263

Diurnal rhythms, contd.

- tidal rhythm, *Fundulus similis*, 6558
- Trichoptera, larvae, 3428
- vertical migration, *Centrobranchus nigroocellatus*, Madeira, 9027
- vertical migration, *Leptodora kindtii*, 4886
- vertical migration, Sternoptychidae, Gulf of Mexico, 4314
- vertical movements, *Oncorhynchus nerka*, 8101

Diurnal variations,

- Ceratophyllum*, British Isles, 7597
- feeding behaviour, *Salmo trutta*, 5307

Diving,

- deep diving, decompression, 2914
- geographical orientation, man, 8268
- redistribution of cardiac output in Alligator, 777
- relation with orientation, *Anas*, 4224
- responses, *Cinclus mexicanus*, 8819
- shark avoidance, 5207

DNA, 4924, 5310

- amino acid as replication trigger, 4467
- amino acids as stimulating agents of DNA replication in Poeciliid melanomas, 469
- and Clupeine, 2965
- as effected by growth rate in *Astasia longa* cells, 1087
- associated RNA in *Chlorella*, 554
- autonomy, *Paramecium*, 4813
- base composition, 4572
- base composition, *Cancer pagarus*, 6004
- base composition, flexibacteria, 1101
- biosynthesis, *Artemia nauplius*, 2625
- biosynthesis, *Cylindrotheca fusiformis*, 4623
- biosynthesis, *Echinus* eggs, 4182
- biosynthesis, effect of triiodothyronine, *Rana catesbeiana*, 321
- biosynthesis, giant neurons, *Tritonia diomedea*, 6127
- biosynthesis, hybrid sea urchin, sand dollar, 7909
- biosynthesis, nuclei, *Tetrahymena*, 7653
- biosynthesis, synchronized cultures of *Tetrahymena*, 1158
- biosynthesis, timing in *Amoeba*, 92
- biosynthesis, *Xenopus laevis*, 5139
- Chlorella pyrenoidosa*, 4663
- content, chromosomes, Amphibia, 6227
- content, influence of external factors on content, cysts, *Tillina magna*, 7650
- distribution, oocytes nucleoli, amphibian, 5129
- excision of 7-methylguanine, *Euglena gracilis*, 5761
- factors influencing the retention by membrane filters, 5310
- fish, 4380
- from liver of spawning salmon, 367
- in cell nuclei, vertebrate evolution, 8732
- interactions, sperm, *Clupea harengus*, 5264
- interaction with acridine dyes, 8088
- interspecific variability, Amphibia, 3520
- location, *Xenopus*, 2863
- mutagen activity, *Paramecium aurelia*, 4812
- nucleic, in 2 *Artemia* biotypes, 663
- of marine vibrios pathogenic to fish, 1114
- of various fish tissues, 816
- origin of thymine, distribution, Echinoidea, 7120
- Paramecium aurelia*, 4814
- RNA, *Vibrio marinus*, 5778
- satellite, sperm, *Lytechinus variegatus*, 7118

spermatogenic cells, *Emerita analoga*, 6013

Tetrahymena pyriformis, 2569

variability of content in micronuclei, *Paramecium bursaria*, 5848

variation in quantity in plastids, *Acetabularia*, 5690

DNA-dependent RNA polymerase, *Chlamydomonas*, 3232

DNA methylases, chromatography, 4572

DNA/nuclear size ratio,

in early development of *Aplysia*, 720

significance in tissue differentiation, 718

DNA photoreactive enzymes, *Anacystis nidulans*, 6738

DNA polymerase,

molecular association with chromatin, embryos,

Strongylocentrotus, 7128

Salmo gairdneri liver, 5295

Dogfish,

amino acid sequences, trypsinogen, 7260

localization of fibres, dehydrogenase succinate, 7262

Dogieli, 6900

Dolerocypis, 4975

Dolichodorus heterocephalus, distribution in Lake Champlain, 1186

Dolichosudis fuliginosa gen. et sp.n. (Paralepididae), caught off Brazilian coast, 926

Dolioletta gegenbauri, 9043

Dolphin,

alanylhistidine, muscles, 5153

modification of tryptophan and tyrosine residues, myoglobin, 6312

vocalization, 5154

Donax cuneatus, annual reproductive cycle, Madras coast, 4149

Donax denticulatus, functional morphology, 252

Doridae, localization of cholinesterase in glial and interstitial cells, 7027

Doropygus seclusus, ultrastructure of nauplius eye, 7729

Dorosoma, anatomy, digestive system, 3606

Dorosoma cepedianum, 4417

fecundity, 2968

pumping as harvesting method, 795

selective predation of zooplankton, 6388

Dosidicus, sodium influxes, 5035

Dosidicus gigas,

characterization of membrane fractions, 5034

ecology, South Atlantic, 5033

jet propulsion, 7900

ultrastructure of giant nerve fibres, 7899

Doto ostenta, 6117

Downstream drift, invertebrates, stream ecosystem, 2394

Dracunculus medinensis, vector by Cyclops, 7726

Drainage, effect of reservoir fauna, 1684

Draparnaldia, chromosome numbers, 1778

Draparnaldia champlainensis sp.n., Lake Champlain, 4668

Draparnaldia jaoi nom.n., Lake Champlain, 4668

Draparnaldia plumosa, cation requirements, 2509

Dredges, for collection of Mollusca, 3460

Dreissena, 4798, 8551

ciliary inhibition by plasma from cystic fibrosis patients and parents, 6138

Dreissena polymorpha, rhythms of adductor activity, feeding, digestion and excretion, 2008

Dreissenidae, of estuaries of Rhine, Meuse and Scheldt, 2791

- Drepane**, distribution, India. 8154
Drepane punctata, hyperostosis. 4406
Drepanocladus. 4777
Drift activity, periodicity, of Hydrachnellae. 715
Drift pattern, of aquatic insects. 702
Drugs. 6714
 Aabomycin A, production and isolation. 3303
 actinomycin D, effects of nucleolar formation, *Xenopus laevis*. 6277
 actinomycin D, modification of regeneration in *Dugesia tigrina*. 5898
 actinomycin, growth parameters of actinomycin-prolonged cell cycles of *Tetrahymena*. 5852
 actinomycin, induction of decrease in central granules, oocytes, *Triturus alpestris*. 6275
 alcohol, lobster axons potential effects. 3415
 Amiloride, effect of sodium transport, *Rana esculenta*. 5103
 amitrole effect on *Lemna minor*. 7605
 anaesthetics for invertebrates. 5822
 anaphylactic reactions, Cephalopoda, fish, frogs. 8686
 antibacterial, use in medicine. 7250
 Benadryl, *Ipomoea pes-caprae*. 3324
 chlortetracycline, identity test, fish. 6324
 effect of cycloheximide on energy metabolism in *Euglena gracilis*. 5762
 effect on chloroplasts, Elodea. 4783
 effect on chloroplasts, *Euglena gracilis*. 6799
 effect on lipid synthesis during chloroplast development, *Euglena gracilis*. 7552
 effect on muscles of *Hirudo medicinalis*. 3958
 effect on sensibility of myocardium, frog. 8800
 methamphetamine, *Brachydanio rerio*. 5231
 morphine metabolism and tolerance, *Carassius auratus*. 8942
 nicotine, Pisces. 6331
 nitrofurantoin, experimental control of columnaris disease, *Oncorhynchus kisutch*. 4326
 oligomycin, effect on shark metabolism. 3600
 oxytocin, effects on skin of *Rana esculenta*. 5107
 PAM, effect on rectus abdominis muscle, frog. 7193
 pharmacology, stomach, *Loligo pealii*. 3486
 phyllotoxin, skin of *Phyllomedusa* spp. 7162
 quinine effects on ampullar receptors, frog. 8791
 responses, *Negaprion brevirostris*. 3599
 thiamine tetrahydrofurfuryl disulphide, heart, *Meretrix meretrix lusoria*. 7887
 treatment of *Bufo marinus* toxins, mammals. 8749
 use to increase fish culture growth rate. 7249
 valinomycin, effects on bladder, *Pseudemys scripta*. 5149
Drupella, taxonomy. 5004
Drusus. 3428
Duck,
 immunization against hepatitis virus. 8018
 synthesis and renewal of proteins, hypophysis. 8016
Dugesia. 8486
 histochemistry and ultrastructure, deutoplasmic inclusions. 4857
Dugesia benazzi, pseudogamy. 127
Dugesia burmaensis. 3943
Dugesia dorotocephala,
 behaviour of cells in vitro. 7681
 electron microscope studies of regeneration. 3942
 thymidine kinase activity during regeneration. 5899
Dugesia indica sp.n. 3943
Dugesia japonica. 4849
Dugesia jimi sp.n., Brazil. 6901
Dugesia lugubris. 3946, 4852
 grafting. 8498
 pseudogamy. 127
 radiation lethality, survival curves. 1174
 tail regeneration. 4858
Dugesia tigrina,
 Bouches-du-Rhone. 126
 effect of AC field frequency on regeneration axis. 643
 modification of regeneration by actinomycin D. 5898
 role of illumination and temperature in sexual reproduction control. 8499
Dugesia veneranda sp.n. (*Tricladia*), Brazil. 6901
Dujardinascaris graberi sp.n., parasite. 3340
Dulichia rhabdoplastis sp.n., commensal. 3389
Dunaliella. 7487, 8400
 chromatographic analysis of pigments. 5721
Dunaliella parva, light-induced proton uptake. 4669
Dunaliella salina, an extreme source of β -carotene. 1051
Dunaliella tertiolecta. 4744, 5500, 5504, 9088
 growth kinetics and iron. 3063
 nitrite reductase. 6766
Durvillea antarctica. 3259
Durvillea, growth. 2528
Dyes,
 experimental marking, *Oncorhynchus gorbuscha*, fluorescent pigment. 6405
 interaction between acridine dyes and DNA. 8088
 TTC, *Laminaria japonica*. 7533
Dylox, (organophosphate), effect on *Salmo* larvae. 982
Dynamene, distribution and habitat preferences, Africa, Europe. 6969
Dyschiriognatha atlantica sp.n., St. Helena. 2731
Dysidea herbacea. 5781
Dytiscidae. 3732
Dytiscus, new type of compound eye. 8624
Dytiscus marginalis, gene amplification in oocytes. 6077

E

- Ears**, influence of quinine on ampullar receptors, frog. 8791
- Eccrinoides monticolae**. 6814
- Ecdyomurus**, ultrastructure of longitudinal muscles of abdomen of larvae. 7009
- Ecdyomurus submontanus sp. n.**, Czechoslovakia. 2715
- Echeneidocoelium indicum**, parasite of *Echeneis naucrates*, Bay of Bengal. 5900
- Echeneis naucrates**, parasitism by *Echeneidocoelium indicum*, Bay of Bengal. 5900
- Echidna zebra**. 4524
- Echinarachnius**, microtubules and filaments in filopods, secondary mesenchyme. 4178
- Echinarachnius parma**, changes in UV-sensitivity of cleavage delay. 8714
hermaphrodite specimen. 754
nucleic acids and protein metabolism, embryos. 8715
- Echinaster echinophorus**, autoradiography of amino acids. 8716
- Echinobothrium reesae**, from sting rays, India. 1175
- Echinocardium cordatum**, Stewart Island. 4527
- Echinodermata**. 5549, 5609, 8241, 8856.
conservation of base sequences, RNA. 7912
hybrid, DNA synthesis. 7909
reproduction. 8699
skeleton. 7905
Spain and Gulf of Gascogne. 7906
- Echinogammarus spp. n.**, Italy, Switzerland. 3390
- Echinoidea**,
distribution, New Zealand. 4189
fossils, Spain. 7107
Hatakezima Island. 4177
origin of thymine from DNA. 7120
physiology of gut mucus cells. 8700
South Shetland, Melchior Archipelago. 2825
- Echinometra**, Hatakezima Island. 4177
- Echinorachnium parma**. 8431
- Echinorhynchus gadi**. 5382
- Echinorhynchus salmonis**, parasites. 5929
- Echinostoma**. 4998
- Echinus**,
changes in proportion of thiol to disulphide in acid-soluble nuclear proteins. 4182
fertilization kinetics. 5050
- Echinus esculentus**,
feeding and control of volume within test. 273
skeletal tissue of spines. 755
- Echiurus echiurus**,
food uptake. 2609
 O_2 uptake. 2610
- Echolocation**. 5180, 8052
Clupea sprattus, British Isles. 7297
Clupea sprattus, western Norway fjords. 8906
effects of thermal structure. 2925
fish counting. 2926
Thunnus, survey, Indian Ocean. 7384
- Echrichtius robustus**. 8844
- Ecklonia**, cytokinins as endogenous growth regulators. 56
- Ecklonia radiata**, extract causing gibberellin antagonism in maize. 578
- Ecnomus spp. n.**, Central Africa. 3424
- Ecnomus hispiniferus sp. n.** 4103
- Ecnomus tropicus**, type material. 4103
- Ecnomus waelbroeckii sp. n.** 4103
- Ecology**. 5561, 7480.
Acanthocephala, Tchad. 7692
Acanthocyclus americanus, Lake Moskva. 6941
Acetabularia mediterranea, Adriatic. 4637
Acipenser hybrids, Danube. 5429
acoustic scattering layers. 5557
Acroloxus, Lake Baikal. 7030
Acrothoracica. 4016
Actinomycetes, lakes, Romania. 8417
Actinomycetes, mud of lakes. 8417
Aedes (*Mucicus*) spp., Africa. 8616
age growth and mortality, South Africa. 4266
aggregations, spawning populations, Cololabis saira, Japan Sea. 8199
Agrobacterium spp, Baltic. 4755
Alaria, Newfoundland. 6783
albatross, Campbell Island. 8020
Alcyonium spp, Scilly Isles. 4835
Aldabra atoll. 8243
algae. 5620
algae, British Columbia. 6727
algae, Florida. 5617
algae, Minnesota. 5754
algae, Mlungusi Dam. 4587
algae, Pakistan. 8326
algae, Scotland. 8279
algae, Solomon Islands. 8280
algal colonization, Long Island, New York. 8281
Amphibia, Cuba. 7147
Amphibia, Trinidad. 7146
Amphibia, Venezuela. 5065
Amphipoda, caves, Istria. 4910
Amphipoda, Greenland. 7745
Amphipoda, phytal zone, North Africa. 4908
Ancistrumina nucellae. 4805
Ancylidae, Madagascar. 3435
Anguilla marmorata, Yaku Island. 6546
annual cycle, island seals. 3546
Antithamnion, Japan. 5737
Aphanocladia, Portugal. 7537
Appendicularia, Red Sea. 7937
Aral Sea. 8864
Araneae, Finland. 8640
Archaeogastropoda, Hardangerfjord. 7026
Artemisia longinaria. 2642
artificial microhabitat size, Protozoa. 5825
Arvicola terrestris. 7212
Ascidacea, Baltic. 5060
Asellidae, Saône. 5992
Aspidogaster conchicola, Romania. 8492
associates of echinoderms, Plymouth, Brittany coast. 7116
associations, chrysophyta, Natal. 3212
Astasiaceae, Euglenophyceae, North East China, Brazil. 7546
Astronesthes cyaneus, Arabian Sea. 8093
Aves, Vistula-river. 7205
Avrainvillea spp, Japan. 5694
Bacillariophyceae, Cayler Prairie. 5645
bacteria, abyssal zone. 5771
bacteria, Aral Sea. 5784
bacteria, Bay of Naples. 5790

Ecology, contd.

- bacteria, euphotic zone, Japan. 6803
- bacteria, Kuroshio current. 5773
- bacteria, Lake Balaton. 7563
- bacteria, Louisiana. 7566
- bacteria, phytoplankton, Belorussian lakes. 6622
- bacteria, rice fields. 7578
- bacteria, Tyrrhenian Sea. 5791
- bacterial diversity, Mediterranean and Red Sea. 5769
- bacterial role in iron system, Krasnoje lake. 5785
- bacterioplankton, Lake Balaton. 7563, 7564
- Balanus improvisus, Mecklenburg. 8551
- Baltic sea-shore meadows. 4776
- Bangia atropurpurea, Lake Erie. 6785
- barrier beach island pond, Carolina. 8238
- Bathyporeia. 5996
- Batrachylodes, Solomon Islands. 6209
- beaches, Arcachon, France. 1689
- Bellingham Harbor. 7458
- benthos, algae. 8282
- benthos and fish, False Bay, South Africa. 8241
- benthos, Bahia de San Quintin, Baja California. 4533
- benthos, Baltic canal. 6624
- benthos, Baltic Sea. 5544, 5546
- benthos, Barents Sea. 5542
- benthos, brackish water, Sea of Japan. 6625
- benthos, British Columbia. 7440
- benthos decline, Lubeck Bight. 5545
- benthos, Great Australian Bay and New Zealand. 6634
- benthos, Indian Ocean shelves. 5540
- benthos, Ivory Coast. 5548
- benthos, Lake Chad. 4512
- benthos, Polychaeta, Mediterranean. 4868
- benthos, River Danube. 8435
- benthos, Stewart Island. 4527
- benthos variations, Danube delta. 4520
- Berthelinia caribbea. 3437
- biocoenoses, benthos, Baltic Sea. 5541
- biocoenoses, Icelandic thermal waters. 6612
- biocoenoses, microbenthos, Germany. 7435
- biogeocoenotic system of marine littoral. 5538
- biogeography, Ceramiella, Caribbean. 5739
- biological aspects of water movement. 1690
- biological fluctuations, Baltic Sea. 9072
- biological problems, Aegean Sea. 5550
- bionomic study, loose substrata, Gulf of Fos. 4541
- biotopes, Dexaminidae. 3410
- Bithynia caerulea, Lake Balkhash. 7032
- bivalve shell mineralogy. 7062
- Bivalvia, Baltic Sea. 8670
- Blenniidae, India coast. 8163
- Blenniidae, Ligurian Sea. 5390
- bog habitat, Sweden. 5809
- Bomolochidae, Caribbean. 6943
- Bonnemaisonia hamifera, Nova Scotia. 3265
- Bosmina, Cyclops, Diaptomus, Iowa. 6606
- bottom fauna, Volta Lake. 3724
- brackish water environment. 3741, 8237
- brackish water Protozoa, Hiddensee. 8441
- brackish water species. 9068
- Branchiostoma lanceolatum, Helgoland. 6199
- Branchipus alpinus, Piedmont. 4884
- Bryophyta. 7600
- Bryozoa, Black Sea. 2039
- Bryozoa, burrowing. 2834
- Bryozoa, German marine and brackish waters. 8724
- Bufo, Africa. 5066
- Bufo populations. 7156
- Calanoida, abyssal zone, Atlantic. 8544
- Calanus, Sea of Japan. 6945
- Calliactis parasitica, Dardanus arrosor. 4922
- Callinectes sapidus, Florida. 6000
- Callorhinus ursinus, Pribilof Islands. 6303
- Caribbean waters. 5670
- carp-bream, after fish ban, Istra Reservoir. 8955
- cartesian diver methods for measurement of respiratory rate, invertebrates. 6700
- Caryophyllaeus laticeps, River Avon. 8493
- Castor, Virginia. 7215
- Catostomus suttneri, California. 8952
- cave fauna, Isopoda. 8552
- cave Protozoa, Kentucky. 7622
- caves and mines, Morecambe Bay. 7615
- caves, Belgium. 7621
- caves, Crustacea, Virginia. 7742
- caves, Madagascar. 8432
- caves, United States. 7620
- Cephalopoda, Japan. 7897
- Ceramiaceae, Argentina. 4705
- Ceramiaceae, Tanzania. 8381
- Chalk Point, Maryland. 5583
- change in parasite fauna of Roccus americanus in new habitats. 6518
- Charophyceae. 1771
- Chelonia, Costa Rica. 8012
- Chelonia mydas, Costa Rica. 8013
- chemical, Myriophyllum spp. 5814
- Chionoecetes opilio, Japan Sea. 6967
- Chironomidae, United States. 3432
- Chironomidae, Yugoslavia. 3422
- Chitonida, Formosa. 7105
- Chlamydomonas. 1041
- Chlamydomonas. 4646
- Chlorogonium, Hyalagonium. 5718
- Chytridiomycetes annulatus, Douglas Lake. 5801
- Ciliata, Caspian Sea. 6830
- Ciliata, White Sea. 7627
- Cladocera, Chad. 8539
- Cladocera, Denmark. 5949
- Cladocera, Lake Balaton. 6937
- Cladophora glomerata, Great Lakes. 2511
- classification of sea basins, East Murman. 6639
- Clinidae, South Africa. 8162
- closed ecological systems. 1013
- Clupea harengus, Isle of Man. 5261
- Clupea harengus, Norwegian populations. 5260
- coastal, aerial photography. 3161
- coastal marine sediments, British Columbia. 7440
- coastal nitrifying bacteria. 5780
- colonization, Chrysophyta, Carolina. 8310
- commensal, shrimp, coral, Indo-Pacific. 4909
- community concept with relation to marine zoology. 495
- comparative study, Porphyridium spp. 4720
- competition factor, Baltic Sea. 9070
- complementary feeding niches sustained by size-selective predation. 6604
- conductivity of waters, Mato Grosso. 5528
- coral. 3325
- coralligenous beds, Mediterranean Sea. 6631
- Coregonus lavaretus, Haweswater and Ullswater. 5266
- Corixidae, Netherlands Antilles. 7002
- Corophium volutator. 8574
- Coryphella fusca. 7037

Ecology, conti.

- Cottus gobio* and *Cottus poecilopus*. 433
Crangon crangon, Kiel bight. 4920
Crassostrea virginica, Florida. 250
Crenobia alpina, Europe. 6899
Cribrilaria, Mediterranean. 4193
Crinia tasmaniensis. 7959
Crustacea, Lake Balaton. 6946
Crustacea, Lake Chad. 8540
Cryptomonas, *Chlorogonium*. 5757
Culaea inconstans, burrowing. 5441
Culiseta glaphyoptera. 8621
Cyanophyceae, Marseilles region. 3793
Cyanophyceae, Oahu. 8291
Cyclammina, Gulf of Taranto. 5551
Cymopolia, Pyrénées. 5720
Cyprinodontidae, Louisiana. 6544
Cyprinodontidae, Netherlands Antilles. 7389
daily activity rhythm, *Bufo viridis*, Lake Issyk-kul. 8753
Danube river, algal biomass, drift. 3128
Daphnia, adaptation to toxic conditions. 7721
Daphnia spp, Bull Shoals Reservoir. 7720
day-time variations in production rates, *Ceratomyxus demersum*, British Isles. 7597
defence, Coleoptera. 8615
Deirochelys reticularia. 2892
Demospongiae. 6872
Dermochelys coriacea, Trinidad. 4252
Diaphus garmani. 7390
diatom associations, Nonoti river, South Africa. 5657
Diatomaceae, Andorra. 5648
Diatomaceae, Australia. 5649
Diatomaceae, Badrinath hot springs. 5652
Diatomaceae, Jutland. 6739
Diatomaceae, Kuwait. 5651
Diatomaceae, Minnesota. 5647
Diatomaceae, Mysore. 5653
Diatomaceae, New Zealand. 5673
Diatomaceae, Norway. 5650
Diatomaceae, South Africa, Lesotho. 5658
Diatomaceae, West Indian Ocean. 5654
Dictyota, Tanzania. 8373
Didemnidae, Glenan Archipelago. 4208
dietary shift, *Pseudemys scripta*. 3536
Digenea, Bermuda. 8488
Dinoflagellata, Cuba. 6796
Dinoflagellata, Straits of Florida. 5755
Diogenella, West Indies. 7728
Diplectanidae, teleost parasites, Gulf of Lion. 7680
Diplostauron elegans. 6765, 8355
Discias exul, Great Barrier Reef. 7760
distribution, Amphibia, Zululand. 6203
distribution, *Laecapex fuscus*, *Cybister occidentalis*, Florida. 7863
distribution, mesopelagic fishes, western North Atlantic. 6319
distribution, *Mya arenaria*, Black Sea. 6143
distribution, salamanders. 4218
distribution, *Taenioma* spp, Venezuela. 5753
distribution, zoobenthos, Mozambique Channel. 4530
diversity index in benthic macroinvertebrates. 8437
Dosidicus gigas, Peru. 5033
downstream drift of stream invertebrate fauna. 485, 2394
drift activity, Hydrachnellae. 6090
drift fauna, lotic environment. 8436
Durme at Hamme. 7436
Echinocardium cordatum, Seine Estuary. 7113
Echinoidea, Spain. 7107
Echinorhynchus salmonis. 5929
ecophysiology, *Homarus gammarus*. 6021
ecotopes, Polychaeta. 6921
effects of chemical wastes on littoral fauna, Natal. 8255
effects of high water level, Lake Victoria. 5532
effects of low pH on blood pH and sodium balance, *Salvelinus fontinalis*. 6436
effects of oil pollution, Finland. 6687
effects of oil pollution, Southampton. 6686
effects of pollution, India. 6742
effects of pollution on fish. 8247
effects of thermal additions on benthos, Cape Cod Canal. 5584
effects of thermal pollution, plant communities, Miami. 8256
Eimeria, Lake Seliger. 6836
Eisenia bicyclis, Japan. 7531
Eleutherodactylus, Antilles. 7158
Emys orbicularis, Poland. 4253
Enchytraeidae, Romania. 8523
endofauna, *Zostera* beds, Algeria. 4540
energetics, sea population studies. 1670
energy flows. 5522
Entomostraca. 3979
environmental control, sensitivity of interneurone, crayfish. 6990
environmental factors on emergence, *Oncorhynchus keta*. 4322
environmentally induced changes in fatty acids in *Chlorella*. 4659
Eolidacea, Tanzania. 7843
Ephemeroptera, South Africa. 8608
epibionts of *Macrocyclus* as hydrological indicators. 8376
Epinephelus morio, Gulf of Mexico. 6496
Epistylis galea. 6848
Erpobdella punctata. 4873
Esox lucius, Windermere. 4318
establishment, *Tilapia mossambica*. 3672
Estelinascidia herdmani. 7942
estimation of numbers, Chlorophyta. 4636
Ethmodiscus spp., Tahiti. 8315
Euglenophyceae, Bulgaria. 8392
Eulimnogammarus, Europe. 7764
Euphausiacea. 6016
Euphausiacea, Cape Verde Islands. 7747
Eupleura, Urosalpinx. 8654
Eurycerus lamellatus, Lake Naroch. 8542
Eurypharynx pelecyanoides, Hispaniola Basin. 6554
Eutima commensalis sp.n. 5868
exposed shore population, *Nucella lapillus*. 6122
extinction, Ammonoidea. 7094
extreme environments, cryobiotic potentialities. 4568
Exuviaella cordata. 1796
facies of tropical water course, Congo. 3728
factors affecting fish migration. 5162
factors influencing year-class strength, *Clupea harengus*, Norwegian waters. 5259
fauna associations, Baltic Sea. 5547
faunal history, North Atlantic. 5612
feeding behaviour, *Arenicola grubbi*, Black Sea. 8525
feeding behaviour, *Aythya affinis*, subarctic Taiger.

Ecology, contd.

- 7207
- feeding behaviour, Castor, Arctic. 8028
- feeding behaviour, Clinocottus analis. 7353
- feeding behaviour, Morone saxatilis. 6506
- feeding behaviour, Pisces, Pacific Ocean. 7232
- feeding behaviour, Thunnidae, Atlantic Ocean. 6539
- feeding habits, Alepisaurus ferox, Pacific. 5430
- feeding, maintenance requirement, Trachurus, Fugu, Salmo. 3601
- feeding mechanisms, Embiotocidae. 5386
- feeding preferences, Bufo asper. 7151
- fish of a small tropical stream. 396
- fish with rubber band. 5597
- fish zones, Czechoslovakia. 3553
- flagellates, Arctic. 4633
- flora antagonistic factors. 5523
- Fluviophylax pygmaeus, Amazon. 6555
- food, Carangoides malabricus, Bay of Bengal. 8165
- food chains, tropical oceans. 5512
- food preferences, Roccus chrysops, Lake Winnebago. 5408
- Foraminifera, Barbados. 6834
- Foraminifera, Brazil. 8445, 8446
- Foraminifera, Canada continental shelf. 8444
- Foraminifera, Isles of Scilly. 7625
- Foraminifera, Ostracoda, Mollusca, Baltic Sea. 5547
- Foraminifera, Pacific. 5511, 6835
- fouling organisms, Ago Bay. 3478
- fouling organisms, Civitavecchia. 4577
- freshwater, Ceylon. 6621
- freshwater fauna, Surinam. 5529
- freshwater gastropods of Madagascar. 4113
- freshwater, Panama, Colombia. 6615
- freshwater planaria, Tsugaru Peninsula. 1859
- freshwater, Plecoptera of a headwater stream. 709
- freshwater, Plecoptera of the Kaltsjokk stream. 710
- freshwater ponds, Hyderabad. 7439
- freshwater, spring brook community. 5524
- freshwater subterranean biotype classification. 5525
- fungi, British Columbia. 6815, 6816
- fungi, Colorado. 7579
- fungi, Iceland. 7584
- fungi, Yugoslavia. 7580
- Gadus morhua, Greenland. 6481
- Gammarus lacustris. 2645
- Gammarus lacustris, Norway. 4929
- Gastrotricha, island of Sylt. 1188
- Geocentrophora cavernicola, cave dwelling Turbellaria, Virginia. 5901
- Glaucidae, Australia. 8655
- Glossiphoniidae. 6924
- Glossogobius olivaceus, Japan. 8169
- Glyceria aquatica, littoral, Czechoslovakia. 6822
- gnotobiotic models, freshwater environment. 3726
- Gobiidae, brackish water environment. 8171
- Gobius, brackish water, Corsica. 3657
- Gobius cobitis, Brittany Coast. 7358
- Goniasteridae, Straits of Florida. 6177
- Gracilaria confervoides, Adriatic. 5744
- growth influences, Acmaea digitalis. 4999
- growth, Luciopeca, River Dnepr. 7362
- growth measurements of Sphagnum. 5818
- growth rate, Odonata. 7825
- growth, Tellina tenuis, Charente-Maritime coast. 4167
- Gymnogongrus norvegicus, Mediterranean. 7540
- Gyrinoidea. 1954
- habitat and homing instinct, Pisces. 7266
- habitat diversity, Embiotocidae. 5386
- habitat, feeding mechanisms, Embiotocidae. 6487
- habitat, parasites in interstitial system of crab gills, Caribbean. 7690
- habitat preferences, Dynamene, Afro-Europe. 6969
- habitat preferences, fauna, Zululand. 6203
- habitat selection, Microhedyle milaschewitchii Yugoslavia. 6116
- Haliclona ecbasis, California. 8462
- Haliotis discus hannai, Japan. 7862
- handicaps, Rana temporaria, Rana arvalis. 5115
- Haustoriidae. 187
- Haustorius arenarius, Netherlands. 3413
- heart adaptations to aquatic environment. 7211
- Helobiae. 5807
- herpetofauna, Southern Aegean Islands. 6230
- herpetofauna, Venice Lagoon. 4213
- Heteroptera, Antilles. 7004
- Heteroptera, Iberian Peninsula. 3425
- Heteroptera, Netherlands Antilles. 7003
- Heteroptera, Poland. 6080, 6081
- Heterotanaeis oerstedii, Baltic Sea. 4921
- Hexagenia naiads, Oklahoma reservoir. 2717
- Hirschmannia viridis in brackish water. 2706
- Hirudinea, Colorado. 3345
- holdfast fauna, Laminaria, British Isles. 7532
- Holothuroidea, New Zealand. 8701
- horizontal distribution, phytoplankton, Gulf of Mexico. 5495
- host-parasite relationship, fish nematodes and hosts. 7700
- Hubbard brook, effects of forest cutting and herbicide treatment. 6614
- Hyalella azteca. 6974
- Hydracarina, Colorado. 2732
- Hydrachnellae, Africa. 7018
- Hyphomycetes, Florida. 7582
- Hyphomycetes, Wisconsin. 7581
- ¹³¹I uptake, biota, Fern Lake, Washington. 4571
- Ictiobus, Arizona. 6468
- immunogenetic differences between populations, Enfraulis encrasicholus. 6394
- infauna, Benthos, Chile Bay. 4528
- influence of deposit-feeding organisms on sediment stability. 6635
- insect communities of a stream, Quebec. 216
- Insecta, Lake Chad. 3427
- insects of water-filled tree holes. 2721
- intertidal, Balanus predation by Thais. 5982
- intertidal distribution, Eurydice spp, British Isles. 6970
- intertidal sandy-beach community, North Carolina. 494
- interspecies interactions, Bufo spp. 6216
- interstitial fauna, Andaman, Nicobar. 8439
- invertebrates, English mountain stream. 2389
- isolation and competitive exclusion, Orconectes spp. 7791
- Isopoda, Cambounes cave. 7744
- Jaera albifrons, Polish Baltic Sea. 1254
- Jesus lalandii. 193
- 'kelp forest', use in pollution. 5588
- key to invertebrates, freshwaters, UK. 5526
- Kogia, Texas Coast. 6307
- Kragewiel, Belgium. 3740
- Lactania dencyanna, New Mexico. 8626

Ecology, contd.

- Lagodon rhomboides, Pensacola. 8993
 Lagune du Brusc. 489
 Lake Långsjön. 9059
 Lake Nordlaguna. 5534
 Lake Olha d'Agua. 2385
 Lake Valkiajarvi, Finland. 6617
 Lake Van. 5531
 Lake Victoria Basin. 487
 Lake Volta. 4514
 Lake Vyalozero. 6610
 Lampetra planeri, Czechoslovakia. 6359
 larvae, Chironomidae. 7006
 larvae, Oncorhynchus nerka, Alaska. 6412
 larvae, Tanytarsini, Finland. 7820
 larval overcrowding, Culicidae. 6075
 Laurencia, Tanzania. 8383
 Leander tenuicornis, Bay of Fundy. 7778
 Leptocuma kinbergii, Brazil littoral. 8545
 Leptonychotes weddelli, McMurdo Sound. 2904
 Leptophlebia cupida, Canada. 6084
 Leptosphaeria discors, salt marsh, North America. 5803
 Lernaean cyprinacea. 3362
 leromictic lakes. 5521
 Leuctra, Caucasia. 7011
 life histories, benthos, Pickerel Slough. 5530
 life histories, Crangonys richmondensis. 6011
 life histories, Thunnus alalunga, Hawaii. 6541
 limnology, Lake Lanao. 3735
 limnology, Vieil-Escaut, Belgium. 3739
 Liostephania. 5662
 Liparis pulchellus. 3663
 littoral diatoms, South Africa. 5656
 littoral environment, Sea of Japan. 7444
 Loch Ewe, plaice. 4468
 Lophosiphonia, Ireland. 8384
 Lubriculidae. 2612
 Lutjanus spp, western Atlantic. 6502
 Lymnea bouilleti, Bavaria. 7042
 Macoma spp, British Columbia. 2794
 Macrocyrtis pyrifera, Tierra del Fuego. 8376
 Madreporia, Banyuls-sur-Mer. 7664
 Maera, Elasmopus, India. 7738
 Mallomonas torquata group. 5676
 mangrove swamp plants, Australia. 7596
 Margaritifera margaritifera, Saxonia. 5022
 marine algae, Washington, British Columbia. 6725
 marine, bionomic study of the N. Gascony continental shelf and the "Grande Vasière". 979
 marine, comparative benthic plant, by SCUBA-monitored quadrats. 1007
 marine, distribution of biomass in rocky intertidal communities on the US Pacific coast. 978
 marine environment, Japan. 8239
 marine fungi. 4766
 marine kill on New Jersey wreck. 5399
 marine mammals, British Columbia. 3549
 marine nitrifying bacteria. 5779
 marine pollution. 5593
 marine sediments, Seychelles. 5549
 Marinogammarus, Oosterschelde. 6029
 Marsala. 4517
 mathematical analysis of pollution. 5587
 mathematical model. 3782
 mathematical model, freshwater system. 4506
 meiobenthos, Bermuda. 6633
 meiobenthos, Bermuda platform. 6628
 Menidia audens, California. 7404
 Merguia rhizophorae, semi-terrestrial shrimp, mangrove swamp. 7783
 methane oxidizing bacteria, Pluss Lake. 3292
 methods, larval settling apparatus. 6696
 methods of estimation for recurrent groups. 4560
 Mexicaniscus laevis. 7784
 microbial processes in Mekhteb Lake. 8406
 Microhydrula pontica, Roscoff. 5875
 Micropogon undulatus, Pensacola. 8993
 Micropterus salmoides, Iowa. 6504
 microscopic bloom-organisms. 9058
 Middle Parana River Valley. 3733
 mineralization, Lake Kizaki-ko. 5775
 mineralization process of organic matter, meso-trophic lake. 5775
 minnows, Danube Delta. 8932
 mire vegetation, Sweden. 4777, 6724
 Mixtopagurus sp.n., symmetrical hermit crab. 7786
 Mnierpes macrocephalus. 6505
 mobile fauna, nocturnal phenomena, light fishing, Mediterranean. 4538
 mobile fauna, nocturnal phenomena, Mediterranean. 4537
 mobile fauna, nocturnal variations dissolved gasses, Mediterranean. 4539
 mobile fauna of fine sands. 4535
 mobile fauna of hard substrates, Mediterranean. 4536
 Mollusca, Great Plains, Hungary. 2754
 Mollusca, Indian Ocean. 8641
 Mordacia spp, Australia. 8873
 mortality, Coregonus artedii, Lake Michigan. 6387
 Mugilides, Armorican Massif. 4464
 Mya arenaria, Black Sea. 5023
 Mysidacea, Bahamas. 5998
 Mysidacea, Bahamas and southern Florida. 6963
 Mysidacea, Japan. 7743
 Mytilus edulis, Ireland. 8679
 Myxine glutinosa. 2939
 Natrix, Mexico. 6298
 Nemapterois biocellatus, Indian Ocean. 6507
 Nematoda, Chad. 7693
 Nematoda, River Po. 4861
 Nephrops andamanicus, South Africa. 3414
 Nereocystis luetkeana. 8377
 Nereocystis luetkeana, Friday Harbour, Washington. 6784
 Nereocystis luetkeana, sea urchins. 3495
 Neurymenia, southern Japan. 5748
 non-insect invertebrates, Texas caves. 8433
 Norway. 5604
 Nostoc pruniforme. 4614
 Notholca, Lake Baikal. 6919
 Notocrangon antarcticus, Antarctic. 8587
 Notonectidae, Antilles. 7013
 Notophryxus lateralis, California. 6033
 Notropis atherinoides, Canada. 7338
 nutrition, Nannocalanus, Eucalanus, Guinea Bay. 8548
 Ocypode, Migiurtinia. 4946
 Odonata. 7820
 Odonata, Magdeburg. 7014
 Odonata, Malaysia. 3429
 oil pollution in salt marshes. 6690
 oil pollution, Massachusetts. 5596
 oil pollution, Santa Barbara. 7460
 Oligochaeta. 6929

Ecology, contd.

- Oligochaeta, Isle of Sylt. 7701
 oligochaetes from flood zone of lake, Romania. 8524
 Oncorhynchus keta. 8098
 Oncorhynchus masou. 2977
 Oncorhynchus nerka, Brownlee Reservoir. 6418
 Oniscoidia, Thau Basin. 7741
 Opisthobranchia, Curacao. 7841
 Opisthobranchia, southern tropical Pacific. 8642
 optimum escapement, *Oncorhynchus nerka*, Alaska. 6419
Orcinus orca. 8847
 origin, Diatomaceae, Montana. 5646
 Orthopsyllus, Norfolk. 3363
Oscillatoria rubescens. 476
 Ostracoda, Isles of Scilly. 7812
 Ostracoda, Texas. 6060
Ostroumovia inkermanica, South Africa. 7672
 oxygen resources. 6640
 Palaemonidae, Atyidae, New Caledonia. 7750
 paleoecology, algal distribution in Pennsylvanian, USA. 5629
 paleoecology, Foraminifera, North Dakota. 5839
 paleoecology, North Carolina. 7612
 paleoecology, Upper Cambrian, Texas. 7132
Pandalus montagui, Quebec. 4954, 4955
Papenfussiella callitricha, Greenland. 3260
 parasite, *Ergasilus confusus* in *Perca fluviatilis*, Ontario. 7730
 parasites, Mollusca, Amudar'ya Delta. 8643
Paromalostomum. 128
Parophrys vetulus, Puget Sound. 5464
 part played by V. I. Lenin. 9135
 Patagonia biocenotic environment. 4244
 pelagic communities trophic relationships, tropical ocean. 5512
 Penaeidae. 8555
Penaeus duorarum, Dahomey. 3372
Penaeus, North Atlantic. 6044
Penaeus orientalis. 6982
Penilia avirostris, Mediterranean. 5537
 periodicity of algae, India. 6742
Periophthalmus schlosseri, India. 6511
Petropedetes natator, Sierra Leone. 302
Phaeocystis poucheti. 5679
 Phaeophyceae, Eastern Gulf of Mexico. 54
 Phaeophyceae, exudates. 3257
 Phaeophyceae, Finland. 6782, 7530
 Phaeophyceae, Greenland. 7529
 Pharetronidae. 6870
 Phoronidea. 6187
 phycological, Washington. 6728
 Phycomycetes, Baltic and North Seas. 8421
 Phycomycetes, mangroves, Brazil. 7583
 physiochemical conditions of Bacillariophyta deposition, Oregon. 6741
 physiological, *Cordylophora caspia*, Baltic canals. 4839
 physiological, *Leucothrix mucor*. 4770
 phytobenthos, Italy. 5618
 phytoplankton communities, White Sea. 8230
 phytoplankton, Crapina-Jijila lake. 3708
 phytoplankton, Indian Ocean. 5490
 phytoplankton, Lake Balaton. 7428
 phytoplankton, Ligurian Sea. 5489, 7426
 phytoplankton of alkaline water of Kanem, Chad. 9049
 phytoplankton outbursts, Sweden. 6600
 phytoplankton, Pacific Southern Ocean. 8224
 phytoplankton, Red Sea and Gulf of Aden. 5492
 phytoplankton species composition, Newfoundland. 6599
 phytoplankton, Spitsbergen. 5497
 phytoplankton, Tchad. 8231
 phytoplankton, White Sea. 8229
 phytosociological analysis, marine benthic environment. 4542
 phytosociology, Camarque. 7593
 phytosociology, Laminariales, Mediterranean. 5734
 pigment diversity in lake sediments. 5628
 pike, Lakes Oahu and Sharpe. 6396
 Pisces, Chilka Lakes. 6371
 Pisces, Cuba. 8857
 Pisces, Japan. 8039
 Pisces, Kansas. 8080
 Pisces, Lake Glubokoye. 8859
 Pisces, North Pacific. 8855
 Pisces, Rangiroa. 7663
 Pisces, streams, Portugal. 8860
 Pisces, Venezuelan plains. 6374
 Pisces, Washington. 8038
Psidia, USSR. 7892
 place of organisms in size scale. 7478
 place, prey-predator relation. 4468
 Planaria, Japan. 4849
 Planaria, Mediterranean area. 6905
 plankton. 5479
 plankton, Columbia River estuary. 4483
 plankton, Germany. 6597
 plankton, Lake Pääjärvi. 5485
 plankton, Louisiana. 6596
 plankton succession, Japan. 7434
 plankton, Volta Basin. 7437
 planktonic biology, Rotifera. 6915
 planktonic Foraminifera. 5838
 Planorbidae, southern United States. 3440
Plesionika ensis, Arabian Sea. 7801
 Pogonophora. 6188
 polar regions. 7619
 pollen dispersion, Lake Tahoe. 6613
 pollution effects, benthos, Adriatic. 7467
 pollution, Great Barrier Reef. 9098
 pollution, impoundments. 7007
 pollution, Indian River complex. 8246
 pollution, Mediterranean. 6679
 pollution of Baltic. 5578
 pollution scale. 7470
 Polychaeta, Mexico. 8520
 polychaetes, pollution, Los Angeles Harbour. 4556
Pomacentrus otophorus, Caribbean. 4425
 ponds, Dyle Valley, Belgium. 971
 population dynamics, Rotifera, Romania. 8519
 population dynamics, *Scrobicularia plana*, North Wales. 7090
 population ecology, *Dicathais aegrota*, Western Australia. 4119
 population studies, *Ondatra zibethicus*. 7221
 population studies, *Scrobicularia plana*, North Wales. 7090
 Porifera. 6873, 7659
 Porifera, microflora, Lago di Faro. 4831
 Porifera, Palaeozoic. 7654
 Porpita. 4846
 posing behaviour, *Uca tangeri*. 6996
 postglacial lakes, algae. 5627
 predation by *Opsariichthys uncirostris* on Pleco-

Ecology, contd.

- glossus altivelis*, Lake Biwa. 7340
 predation of triclads. 644
 primary productivity, Laguna de Bay. 3722
 primary productivity, Pacific Ocean. 9056
 productivity, Kuban River vegetation. 9054
 protozoan communities. 1828
Pruvotfolia psellotes gen. et sp. n., English Channel. 7872
psammophilic infusorians, White Sea. 5539
Pseudopythina rugifera. 263
Ptereleotris distribution, Indian Ocean. 6515
Pycnogonida, Crozet Island. 8634
Pycnogonida, Greenland. 7837
Pyramydomonadaceae, China. 8365
Radicilingua thysanorhizans, Berre Lake. 7544
Rana. 5115
Rana arvalis, Fredrikstad. 5095
Rana arvalis, Netherlands. 8761
 Recent coral reefs. 6888
Regalecus glesne, Mediterranean. 5471
 relationship of environment to populations, *Oxytrema*. 6123
 relict faunas, *Salvelinus alpinus*, Quebec. 3620
 reproduction, Amphibia, Transvaal highveld. 287
 reproduction, density change effects, *Lymnaea stagnalis*. 8658
 reproduction, *Saprolegniaceae*. 6818
 reproduction, *Sterna albifrons*, California. 7208
 Reptilia, Cuba. 7147
 requirements, larvae, Bivalvia. 6128
 resurgence springs, France. 969
Rhabdopleura compacta. 2845
Rhithropanopeus harrisi, Weichsel delta. 4970
Rhizopsammia minuta, Japan. 8476
Rhizosolenia styliformis, North Atlantic, North Sea. 8321
 Rhodophyta, Marshall Islands. 7534
 River Tyne. 6682
 rocks and wall habitats, Diatomaceae. 5660
 rocky shores, Kenya and Tanzania. 6632
 Rogneda, Marseilles. 6908
 Rotifera, Hiddensee. 5930
 Rotifera, peatbog, Romania. 8518
 Rotifera, Romania. 8519
 Russian terms. 7479
 salamander populations, Marion Lake, B.C. 3523
Salmo, Maine. 6432
Salmonella. 3142
Salmonella, Gulf of Aarhus. 6683
 salt lakes, British Columbia. 3742
Salvelinus, *Salmo*, Mergus, Au Sable River. 6434
 Santa Barbara Channel, pollution. 5594
Saprolegniaceae, Iceland. 7584
Sarda orientalis, Ceylon. 5409
Sardinella marquesensis. 8928
Sardinops ocellata, influence of oceanographic anomaly. 4526
 Sargasso Sea, oil pollution. 5595
 schooling behaviour, *Lutianus monostigma*, Aldabra. 7366
Scomber japonicus, Japan. 8183
Scrobicularia plana. 7091
 seasonal abundance and distribution of benthos, pond. 3736
 seasonal factors, silicoflagellates, Aegean Sea. 8314
Sebastodes flavidus. 908
 sequential sampling to obtain population estimates. 9107
Sesarma catenata, *Cyclograpsus punctatus*. 210
 sewage pollution, Marseilles. 7468
 short-term variations of surface diatoms, Kuroshio, Japan. 8309
 significance of sounds, *Alytes obstetricans*. 6204, 6205
Simulium aureosimile, Yemen. 8633
Simulium ibariense, Poland. 6089
Sitticus tullgreni, Finland. 8640
 size-sexual ratio, Pisces. 7271
 snakes. 8804
 soil Protozoa, Louisiana. 5827
Spartina anglica, Denmark. 6829
Sphecoidea, marshy meadows. 2719
Spirobranchus, Caribbean. 6932
Spirorbinae, West Indies. 6933
 status, Avifauna, Hawaii. 3542
 status, *Lota lota*, British Isles. 7345
 Stephidae, Bahamas. 6952
Stephos spp, Bahamas. 6952
Stomatopoda, Madagascar. 7746
 stranded species, Japan. 5222
 stream bed, Ontario. 6611
 stream fishes. 484
 stream insects. 6066
 studies on rare planktonic protozoa in the Mediterranean. 3885
 Styelidae, Caribbean. 7139
 subalpine lakes. 7438
 subantarctic Campbell Island. 9134
 sublittoral Gammaridea, Hawaii. 5988
 submerged marine sands. 6199
 submerged trees as benthos substrate, Lake Kariba. 7818
 substrate discrimination, *Pectinatella magnifica*. 7134
 substrate specificity, Harpacticoida. 8543
 succession, *Balanus improvisus*, Mecklenburg. 8551
 succession, plankton, Japan. 7434
 Suez Canal, Nile, Aswan Dam. 9137
 sulphur, Black Sea. 5564
 sulphur bacteria, marine species. 5786
 survival of hatchery-reared salmon fry, Scotland. 6435
 Swanage Bay, British Isles. 8242
 swarming, *Noctiluca scintillans*, Brittany coast. 7560
 symbiotic relationship between *Caranx hippos* and hermit crab. 6493
 synchrony in marine phytoplankton. 5500
Tabellaria fenestrata, Untersee, Obersee. 5496
 Taenioma, Venezuela. 6794
 tagging estimates, Iowa. 6321
 Tamar Estuary. 3743
 Teleostei, Gilbert Islands. 6373
 temperature effects on oxygen requirements. 5568
 temperature preferences, *Podon polyphemoides*. 7815
 temperature resistance, algae. 5619
 temperature selection, *Carassius auratus*. 6447
 temporal variation, *Brachionus calyciflorus*. 5926
 Testacea. 8443
 Testacea, Iceland. 3316
Thalassia testudinum diatom flora, Florida. 5644
Theragra chalcogramma, Japan. 8152
 thermal pollution. 7611

Ecology, cont'd

- thermal pollution, California. 5582
- thermal pollution, Mississippi. 5580
- thermal pollution, Pacific coast. 5581
- thermal pollution, planning. 5585
- thermal pollution limits. 5586
- thermophilic Cyanophyta. 8294
- Thraustochytriaceae, substrates. 7585
- tide-pools, Murman coast. 7442
- Tilapia alcalica. 2290
- Tilapia, Lake Mariut, Egypt. 5419
- Tilapia, Malaysia. 5417
- Tilapia tholloni. 5420
- Tinca tinca, Ireland. 8970
- Tisbe aragoi sp. n., Banyuls-sur-Mer. 7733
- tolerance, Micrasterias, Osaka. 3239
- torrential streams. 2723
- Trachypterus iris, Santander. 5478
- Trematoda, India. 8481
- Trichomycetae, France. 6814
- Trichoptera. 6070
- Trichoptera, Africa, bibliography. 8610
- Tridacna, Palau Islands. 3481
- Triloculina echinata, Arabian Sea. 5854
- Tylos latreilli. 701
- underwater topography, Gulf of Mannar. 4531
- Unionidae, Danube. 8684
- upstream migrations, Philopotamus montanus, Swedish-Lapland. 6086
- Uria aalge, Norway. 8024
- use of Salton Sea coast by Aves. 7206
- use of wood plants, Castor, Ohio. 7213
- Vaal Dam Catchment. 5533
- variations in marine algae, Virginia. 5733
- vascular hydrophytes, Lake Kariba, Rhodesia. 2559
- Vaucheria, central Europe. 6747
- vegetation, California. 7595
- vegetation, Port-Cros Island. 7606, 7607
- Vitbergen Pond. 3738
- volcanic craters, Diatomaceae, Galapagos Islands. 5655
- Volta Basin. 7437
- Wahner Heath Lake, Cologne. 4510
- waste water stratification, Lake Pfaffikon. 3750
- water mixing, African Lakes. 3730
- water purification by Scirpus lacustris. 4779
- yeasts, Lake Champlain. 5798
- zonation, Trochidae. 6118
- zoocenosis on aquatic plant stems, Danube Delta. 8423
- zooplankton, Baffin Island. 480
- zooplankton, Black Sea, Mediterranean, Atlantic. 2357
- zooplankton, Hawaii. 9052
- zooplankton, Kola Peninsula. 7432
- zooplankton, Lake George. 3067
- Zygogonium, Yellowstone Park. 3249
- Ecolsonia cutlerensis* gen. et sp. n., Mexico. 5087
- Economics, production and microalgae. 2478
- Ectinosoma abraui*. 6946
- Ectocarpaceae, of the English Channel. 55
- Ectocarpales (Myrionemataceae) *Phaeostromatella* gen. n. 3840
- Ectocarpus. 6784
- Ectocarpus acutus*, cell wall. 1785
- Ectocarpus fasciculatus*, iodine and bromine requirements. 1069
- vitamin B12 requirement. 1070
- Ectocarpus siliculosus*
- Ectoderm,
 - Amphibia, protein synthesis. 7944
 - composition of glycopeptides, *Loligo opalescens*. 8087
 - cortical anatomy of *Stylonychia notophora* during binary fission. 5851
 - cuticle composition, *Acanthosentis oligospinus*. 5922
 - differentiation capacities, *Ambystoma*. 7148
 - effect of aldosterone, frog. 7180
 - glands, histochemistry, *Rita rita*. 6480
 - pellicle, *Opalina ranarum*, electron microscopy. 5844
 - phylocaerulein content, *Phyllomedusa*. 7162
 - problems of staining, fishes. 3555
 - Reptilia, fibrous proteins. 8005
 - skin, anti-gastrin immunofluorescence, *Hyla crepitans*. 3508
 - sodium transport, *Rana*. 7187
 - spines, *Heterocentrotus*, banding. 3497
 - structure, *Thyone briareus*. 7926
 - teleosts. 5225
 - temperature relations and underwater endurance, *Sorex*. 3551
 - Torpedo marmorata*. 7264
 - transport characteristics, *Bufo marinus*. 5084
 - ultrastructure, *Euglena gracilis*. 5760
 - ultrastructure, *Helostoma temminckii*. 8992
 - ultrastructure, *Hippoglossoides elassodon*. 4455
- Ectoprocta,
 - distribution, India. 4191
 - Isle of Man. 5057
- Ectreposebastes. 8039
- Edlintonia ptychocheila* gen. et sp. n. (Cestoidea), North America. 8500
- Education, role of *Corophium volutator*. 8574
- Eel. 8194
- Effectivity, determination of coefficients, membrane, *Valonia utricularis*. 6778
- Egg membrane, hydrolases, sea urchin. 8703
- Egg membrane lysis, *Tegula pfeifferi*. 8669
- Eggs. 6021, 6170
 - actin-like protein, *Temnopleurus toreumaticus*. 8723
 - alkoxylipids and wax esters, *Mugil cephalus*. 8209
 - American plaice. 2322
 - anucleate, RNA synthesis, *Arbacia punctulata*. 8707
 - Anura. 7144
 - Aplysia* spp. 3436
 - birefringent layer, *Pectinaria gouldii*. 4878
 - blastoderm, *Salvelinus fontinalis*. 6438
 - capsule proteins, *Buccinum undatum*. 7852
 - Cassis madagascariensis*, South Florida. 3441
 - caution in use of sugar-flotation technique. 837
 - changes in RNA, fertilization, sea urchin. 7908
 - changes preceding furrow formation, *Triturus pyrrhogaster*. 8786
 - Chelonia mydas* and *Caretta caretta*, analysed. 326
 - cleavage morphology, *Articulata*. 7932
 - concentrations of water, sodium, potassium in nucleus and cytoplasm, *Amphibia*. 8736
 - Copepoda, development rate. 2634
 - Copepoda, temperature adaptations. 7723
 - cortical and subcortical changes preceding cleavage, *Triturus pyrrhogaster*. 7200
 - cortical cytoplasmic studies, *Aequorea aequorea*, *Armandia brevis*. 5859
 - Corynosoma hamanni*. 3949
 - Dactylogyrus lamellatus*. 5893

Eggs, contd.

- Dentalium. 2820
Dentalium, Feulgen positive granules. 2821
development, *Asterias forbesi*. 7109
development of fragments, *Mytilus*. 7085
dispersion of mitotic apparatus, *Invertebrata*. 7117
effect of delayed fertilization, *Oncorhynchus gorbuscha*. 6421
effect of DNP, pretreatment on cleavage, *Hemicentrotus pulcherrimus*. 7114
effect of hydroxyurea on maturation division and segmentation, *Artemia salina*. 7716
effect of increased temperature, conjoined twins, *Brachydanio rerio*. 6442
egg-laying, *Pacifastacus trowbridgii*. 7792
egg-membrane lysis, *Tegula pfeifferi*. 8469
egg polarity, *Fucales*. 3255
egg shell, *Conchostraca* functions. 7722
electrical coupling between cells, *Fundulus heteroclitus*. 6556
Entomostraca. 3979
enzyme characterization, *Rana pipiens*. 5111
experimental gynogenesis, *Ascidia malaca*. 7140
extra-marsupial development, *Typhlotanis magnificus*. 6994
extraction of actin-like protein, sea urchin. 7127
fertilization, *Bufo arenarum*. 8746
fertilized, isolation of hyaline layer, sea urchin. 6174
fish, aminotransferases. 2989
Fucus, de novo formation of cell wall in rhizoid protuberance. 2533
Fucus, rhizoid formation. 2531
growth in deuterium, *Salvelinus fontinalis*. 390
Heterocarpus wood-masoni. 4050
incorporation of amino acids, sea urchin. 7124
incorporation of thymidine, sea urchin. 7125
induction of oocyte shedding, *Pisaster ochraceus*. 7921
inhibitors, *Hemicentrotus pulcherrimus*. 7916
interphase prolongation, *Teleostei*. 8084
invertebrate, mechanisms of hatching. 1827
Lampetra fluviatilis. 8063
maturation division, *Acipenser* oocytes. 9021
mitotic apparatus, *Polychaeta*. 7117
Monogenea, Chesapeake Bay. 5881
mutual polarization of nearby pairs of fucaceous. 1074
oestrogen interconversions, *Dendroaster excentricus*. 6176
oocytes, yolk nuclei, teleosts. 2958
oogenesis, *Nereis pelagica*. 4875
oogenesis, *Teleostii*. 7422
origin of "germinal cytoplasm" in *Xenopus*. 774
osmoregulation, fish. 3556
oviposition, *Panulirus homarus*. 3417
oviposition, *Piona alpicola*. 8639
ovogenesis, evolution of haemolymph proteins, *Carcinus maenas*. 6960
oxygen consumption during embryology, *Labeo rohita*. 6472
Patella, green pigments. 1994
Pecten maximus. 6148
Pectinaria, isolated mitotic apparatus. 1197
phosphorylation, thymidine, *Xenopus laevis*. 5135
Plecoglossus altivelis. 5288
polar lobe, *Dentalium*. 7106
polarity, *Calcarea*. 6882
poly-U stimulation of ribosomes, sea urchin. 6165
polysaccharides, *Rana pipiens*. 2859
production, *Chirocephalus*, effect of temperature on. 666
protein synthesis inhibitors, *Amphibia*. 8737
proteins of hyaline layer. 6173
Pseudorasbora pumila. 5289
quality, *Eleginus navaga*. 8975
Rana pipiens, new membrane production during cleavage. 2075
ripening, ATP control. 5053
rRNA synthesis, *Paracentrotus lividus*. 7918
Salmo gairdneri, electrophoretic analysis of protein. 6430
salmon, lipids. 2961
sea urchin. 6165
sea urchin, effects of amatadine hydrochloride. 2832
separation of cortical granules, *Strongylocentrotus*. 5054
settling on artificial weeds, Sagami Reservoir. 7317
shock treatment, *Limnea*. 5008
sorting devices. 5285
standing crops, *Cladocera*, Lake Yuno-Ko. 6938
survival, *Oncorhynchus tshawytscha*, Washington. 6424
Tegula pfeifferi. 7055
thymidine uptake, *Echinus*. 4182
tosylarginine methylester hydrolase, sea urchin. 8704
toxins, fish, *Amphibia*. 6589
twinning, *Chelydra serpentina*. 8806
Tylosurus corcodilus, Bombay. 4479
ultrastructure, *Brachydanio rerio*. 6443
vitellogenesis, *Bufo bufo*. 3504
water balance, *Salmo salar*. 5301
wax esters, *Trichogaster*, *Mugil*. 7375
Egypt, Arab Republic,
aquaculture, *Mugil cephalus*. 3695
Surirella spp. 24
Ehlersileanira gen. n. (Polychaeta). 8530
Eichhornia crassipes,
control. 3309
growth of isolated shoot apices in culture. 5810
productivity. 609
water outlay and chemical control. 1137
Eigenmannia, electroreceptor inclusion bodies. 4368
Eigenmannia virescens, ampullary organs. 870
Eimeria carpellii. 4366, 4370
Eimeria schulmani. 6836
Eisenia bicyclis. 3190
primary production. 7531
Elachista fucicola, cell wall. 1785
Elachistocythere merista gen. et sp. n. 4093
Elamena cristapies, larvae. 4923
Elaphoidella infernalis. 7725
Elaphoidella pyrenaica. 7725
Elaphoidella rodrigenis (Harpacticoida) sp. n. 6947
Elaphoidella vasconica. 7725
Elasmobranchii,
density. 807
evolution. 350
Georgia, distribution. 4295
morphology of cranial musculature. 7259
osmoregulation. 5166
thyrocalcitonin studies. 358
Elasmopus, India. 7738
Elassoma evergladei. 8480
Elassoma zonatum. 8480

- Elastic organs**, movement receptors firing patterns, *Carcinus minus*. 8571
- Electra**. 8724
- Electric organs**,
Achase, *Electrophorus electricus*. 8140
Electrophorus electricus. 7325
 physiology, *Pisces*. 8848
 regeneration, *Gymnotus carapo*. 8963
Torpedo. 6370
 ultrastructure on medullary command nucleus, *Raia*. 6366
- Electric organ discharge**, *Torpedo marmorata*. 5220
- Electrical parameters**, of *Nitella* membrane. 2524
- Electrical properties**,
 epithelial conduction in hydromedusae. 1855
Hydra, body wall. 1854
 musculature, *Branchiostoma*. 5064
- Electrical response**, of amphibian skin to noradrenalin. 319
- Electricity**,
 apparatus for repelling sharks. 8070
 behaviour, *Amoeba proteus*. 7632
 biological, electroreceptor ultrastructure, *Gnath-nemus petersii*. 4453
 microvolt signals from fishes and the environment. 410
 motion of *Paramecium* in static field. 5846
 passive electrical properties, *Paramecium*. 5846
- Electrochemical measurement**, of O_2 in water. 508
- Electrolysis**, water purification. 4762
- Electron microscopy**, (see also *Anatomy*, *Ultrastructure*)
 acidic phosphatase, goblet-cells excretion *Mytilus*. 3482
 activated sludge. 8408
 adductor muscle and nervous system, larva, *Ano-donta cygnea*. 7070
 adenohipophysis, *Oncorhynchus keta*. 8911
 amphibian oocytes nuclear envelope. 4214
 androgen glands, *Rhithropanopeus harrisi*. 4082
Aulacodiscus. 5664
Barentsia gracilis, muscle fibres and crystalloids. 3947
Brachiomonas submarina. 5695
 calcitic radiate and granulate Foraminifera. 8447
 cardiac organs, *Sepia*. 3492
 cell wall synthesis, *Spirogyra*. 5730
 central nervous system, *Hirudo medicinalis*. 3346
 cerebellum and vestibular organ, frog. 8796
 chloroplasts, *Cryptophyceae*. 5756
 choanocytic origin of male germplasm, *Aplysilla rosea*. 5857
 chordamesoderm-neurectoderm association, gast-rulae, *Xenopus laevis*. 6279
Cocconeis, *Bacillaria*. 7496
 contractile ring equivalent in cortical cytoplasmic filaments of cleaving eggs, *Coelenterata*. 5859
 copper poisoning, *Pseudopleuronectes americanus*. 4475
 cornea, *Ambassis lala*. 3680
Cyclotella, *Stephanodiscus*. 5669
 cytochemistry during zoosporogenesis, *Tetracystis*. 4697
Daphnia pulex optic nerve. 3985
Delphinus delphis adenohipophysis. 4258
 deoxyribonucleoproteins, *Salmo*. 5312
 developing retina, *Rana pipiens*. 4239
 development and tissue interactions during regen-eration of the lips of *Beroe ovata*. 3916
 Diatomaceae. 5659, 7496, 8308
 digestive tubules, *Cardium edule*. 7076
Dileptus cygnus. 3882
 egg polar lobe, *Dentalium*. 7106
 electroreceptor, *Gnathonemus petersii*. 4453
 Enteropneusta, nerve fibre layer and neurocord. 4211
 epidermal organs, head, *Morulus chrysophakedion*. 4377
 epithelium of *Ephydatia fluviatilis*. 3905
Euglena gracilis pellicle. 5760
 eye-spot of *Glennodinium foliacium*. 3850
 fertilization, *Fucus distichus*. 8374
 filaments, *Botryllus schlosseri*. 4206
 giant axon, *Dosidicus gigas*. 7899
 glycogen metabolism, *Paramecium caudatum*. 6859
 gnathopods of *Orchestia*. 4061
 heart, *Procambarus clarkii*. 7804
Helicoproraodon multinucleatum. 7637
Heteroxenia elisabethae. 3924
 Hymenomonas, coccolith production. 4626
 Hymenomonas, scales. 4626
 integument, *Rotifera*. 7688
 interphalangeal area, *Rana pipiens*. 6259
 iridescent bodies, *Gastroclonium*. 3270
 kidney, *Petromyzon marinus*. 4290
Labyrinthula coenocystis. 3321
Limulus polyphemus cardiac ganglion. 6093
 liver, *Ambystoma tigrinum*. 5076
 longitudinal muscles of abdomen, larvae, *Ecdyonurus*, *Baetis*. 7009
Mallomonas spp. 5677
 micromeres, sea urchin embryos. 7122
 midgut diverticulum, *Calanus helgolandicus*. 5964
 mitosis in *Ulva*. 3832
Nais pseudobutusa, fission zone. 3966
 normal pore system, *Ostracoda*. 6998
 nuclear envelope, *Noctiluca miliaris*. 5767
 nucleus and organelles, *Trichelaphis caudatus*. 3902
Oedogonium, cardiacum. 3829
Oedogonium, flagellar roots. 3240
 olfactory neurons, *Lota lota*. 3653
Oligocottus maculosus, spermiogenesis. 4420
Opalina ranarum, staining and fragmentation of pellicle. 5844
Ostracoda, freeze-dried. 6064
Palombiella stephensoni, body wall and musculature. 3945
 paracrystalline inclusions of mitochondria in *Noctiluca miliaris*. 3852
 parathyroid, *Triturus pyrrhogaster*. 8001, 8002
 pineal organ, *Carassius auratus*. 5321
 pit connections, *Bangia fuscopurpurea*. 7538
 polyamines, DNA. 4924
Poteroochromonas malhamensis. 3811
 Precambrian microorganisms. 5638
 pyrenoid matrix. 3854
 receptor cells of small pit organ, *Parasilurus asotus*. 4379
 receptor hairs, *Homarus gammarus*. 7774
 regeneration of *Planaria*. 3942
 sense organs, *Nautilus*. 3491
 shell, *Planktoniella sol*. 5680
 skin, *Hippoglossoides elassodon*. 4455
 sperm, *Carassius auratus*. 7305
 spermatogenesis and spermiogenesis, *Ciona*

- Electron microscopy
 intestinalis. 6200
 spinal cord and notochord, amphioxus. 4200
 Spirogyra, Mitosis. 3245
 Spisula solidissima, spermiogenesis. 4163
 sporulation in oyster pathogen Minchinia costalis.
 5840
 Squalus acanthias teeth. 4299
 staining of siliceous structures. 8265
 stereoscan, Desmidiaceae. 4619
 Sternopyx diaphana retina. 8929
 swim bladder, Pisces. 3682
 trichocysts and paracrystalline inclusions of
 Noctiluca miliaris. 3853
 trophont, Erythropis pavillardi. 7635
 ultrastructure of Chaenea vorax. 3881
 ultrastructure of cortical regions of ancistrocomid
 Ciliates. 3887
 ulcerative dermal necrosis, Salmo salar. 7290
- Electron paramagnetism**, for studying fish lipids. 804
- Electron spin resonance**, ferredoxin, Chlorella. 6754
- Electron-transport chain**, of Tetrahymena pyriformis.
 1146
- Electrona**. 8039
- Electrophoresis**,
 Chlamydomonas. 4646
 cystic fibrosis. 5014
 haemoglobins, tuna. 2304
 monomeric globular proteins, Paramecium aurelia.
 4816
 muscle myogens, Merluccius. 3651
 serum proteins, Salmo salar. 5302
 soluble lens proteins of freshwater fish spp. 857
 spermatozoa. 5025
 starch gel, of crab haemocyanins. 1244
- Electrophorus electricus**,
 electric organ. 7325
 electric organ Achase. 8140
- Electrophysiology**, Aplysia eye. 2001
- Electroreceptors**, Ictalurus nebulosus. 5342
- Eledone**. 3488
- Eledone cirrhosa**, amine oxidases. 2024
- Elegatus bipinnulatus**. 5208
- Eleginus**, strontium and calcium, Sea of Okhotsk. 4305
- Eleginus nava**, egg quality in relation to progeny
 number. 8975
- Eleutherodactylus**, Antilles. 7158
- Eliperurus spinicauda**, comment on objections, to
 proposed suppression. 353
- Elliptio complanata**, iron metabolism, Ottawa river.
 5018
- Elminius modestus**. 6152
 epibiotic on Littorina. 4124
 sensory organs. 4019
 temperature tolerance. 4018
- Elodea**,
 control of chloroplast senescence in detached leaves.
 8424
 drugs, effects on chloroplasts. 4783, 5811
 size differences in nuclei after treatment with in-
 organic acids. 5812
 survival aptitude, Jupiter-atmosphere. 6820
- Elodea canadensis**. 3710
 effect of pH on protoplasm mobility. 3867
 effect of pH on the ATPase properties. 3867
- Elodea densa**,
 action of CO₂ on light-dependent Cl⁻ uptake. 79
 light-triggered changes in membrane potential. 7602
 use of rubidium as indicator for potassium. 6821
- Elopiformes**. 5272
- Elops** sp., leptocephali from Angolan waters. 820
- Elphidium**. 3883
- Elysia viridis**, salinity tolerance. 6110
- Embiotoca jacksoni**. 5389
- Embiotoca lateralis**. 5389
- Embiotocidae**,
 digenetic trematodes. 5389
 feeding mechanisms. 6487
 feeding mechanisms, ecological adaptation. 5386
 tagging, California. 3656
- Emblemariopsis** spp., Western Atlantic. 7355
- Embryology**, (see also Development)
 6128, 6166
 abnormal, Lineus ruber. 7698
 accumulation of zinc, Cyprinus. 6455
 actinomycin D effects, Paracentrotus lividus. 7919
 action of lithium chloride, Rana esculenta. 4231
 Ambystoma mexicanum. 8738
 amphibian, mesoderm movements. 2847
 Ascidia malaca. 7140
 association of DNA polymerase with chromatin,
 Strongylocentrotus. 7128
 Baëtis spp. 4982
 base sequence conservation, RNA, Echinodermata.
 7912
 behaviour of histones and cytoplasmic basic proteins,
 Triturus pyrrhogaster. 6271
 Bivalvia. 6128
 Cakile maritima. 5808
 carbohydrate metabolism, Carassius auratus. 8947
 cellular differentiation, Porifera. 6884
 changes in dermoepidermal junction in resorbing
 tail. 4240
 Chione cancellata. 6134
 cholinesterase, axial mesoderm, Triturus cristatus.
 7197
 cleavage of egg, Ambystoma mexicanum. 7949
 cleavage pattern, sea urchin. 7122
 Coregonus lavaretus. 6452
 cortical and subcortical changes preceding furrow
 formation, Triturus pyrrhogaster eggs. 7200
 degeneration of post embryonic yolk, Astacus. 4030
 deletion-transplantation, Fundulus heteroclitus. 5446
 diffusible factor released fertilization, Bufo arenarum.
 8746
 DNA content, cell nuclei, Rana temporaria. 6251
 effects of fish excreta, Rana esculenta. 7166
 effects of nitrous acid, Rana pipiens. 8772
 effects of progesterone, Nectophrynoides occident-
 alis. 5092
 effects of temperature during embryogenesis on
 number of instars and duration, Aeschna mixta.
 8617
 effects of UV-radiation, alters situs of viscera at
 gastrula and neurula stages, Ambystoma mexi-
 canum. 5075
 Emerita analoga. 7762
 extent to which primary ureter is inducing agent on
 mesonephros, Anura. 5080
 extra-marsupial development of eggs, Typhlotanais
 magnificus. 6994
 formation of somites in Xenopus. 775
 Fundulus heteroclitus. 6556
 Gasterosteus aculeatus. 7396
 genome transcription, Misgurnus fossilis. 7337

Embryology, contd.

- haemocyanin, *Sepia officinalis*. 7103
Hemicentrotus pulcherrimus. 7114
interphase prolongation, Teleostei. 8084
Kupffer's vesicle, *Pleuronectes*, *Gadus*. 7413
larvae, planktonic, *Strongylocentrotus* Japan. 7923
Lepomis macrochirus x *macrochirus*, *Lepomis macrochirus* x *gibbosus*. 2281
Loligo vulgaris. 8689
L-malate dehydrogenase, *Strongylocentrotus purpuratus*. 7924
Mentha aquatica. 4788
mesoderm formation, *Ambystoma mexicana*. 7149
Montacuta percompressa. 7888
nervous system, *Niphargus virei*. 6976
neuromast distribution, larvae, *Cirrhina mrigala*. 7308
nucleic acid synthesis, gastrulation, *Pleurodeles waltlii*. 8758
Oncorhynchus nerka, Alaska. 6415
Opisthopterus tardoore. 4332
organogenesis, Atlanta. 7846
Paracentrotus lividus. 7918
Phalactostemma cidariophilum. 7708
Piona alpicola. 8639
Pisces. 6452
polar lobe of egg, *Dentalium*. 7106
postembryonal growth, Pisces. 5453
Pseudodiaptomus ardjuna. 7731
Pungitius tymensis. 8215
Rana tigrina. 6264
Raphidascaris acus. 5934
reaggregation of dissociated cells, sea urchin. 7123
reversal by light of action of colchicine on mitosis. 8720
RNA polymerase activity, Amphibia. 8735
RNA synthesis. 3519
Rutilus, *Abramis*. 8969
sea urchin. 6165
Siboglinum. 6188, 7136
tail resorption, *Rana pipiens*. 6257
teeth development, *Chondrichthyes*. 8878
teratology, *Carcinus maenas*. 3409
Tetraclita rosea. 173
thymine in DNA, *Echinoidea*. 7120
Tubularia. 7678
ultrastructural changes in the newt egg. 4246
UV effects, *Echinarachnius parma*. 8714
vegetalization induction factor, gastrula, *Xenopus laevis*. 6280
viability of embryos, *Rutilus rutilus heckeli*, *Abramis brama*. 8969
Volvox carteri. 6779
xenoplastic transplants, myoblasts. 6260
- ## Embryos. 6021
- action of lithium chloride, *Rana esculenta*. 4231
apolar, *Fucus vesiculosus*. 4701
brood protection, *Bullia melanoides*. 7034
changes in chromosomal DNA replication, *Rana pipiens*. 6252
discovery of nervous tenuis in Urodela. 7160
effects of irradiation, *Porifera* and *Coelenterata*. 114
effects of pretreatment of egg with DNP, *Hemicentrotus pulcherrimus*. 7114
Engystomops pustulosus, RNA localization. 3507
gemmula, *Ephydatia fluviatilis*. 6887
light influence on growth, *Nemalion*. 5747
Mysis relicta, behaviour. 1261
nucleic acids, protein metabolism, *Echinarachnius parma*. 8715
mRNA, egg, *Arbacia punctulata*. 8705
sea urchin mRNA availability. 5047
Tinca irradiation resulting in reduction of radio-sensitivity. 881
vitamin C and glucose metabolism, *Salmo trutta*. 8110
- ## Emerita analoga,
- DNA content spermatogenic cells. 6013
longshore movements, California. 7761
recruitment to marine populations. 7762
- ## Emerita asiatica, blood sugars in relation to chitin synthesis during cuticle formation. 6014
- ## Emetha audouinii, cuticle. 4060
- ## Emetics, for collection of stomach content of fish. 2288
- ## Emissola. 4270
- ## Emydura gen. n. (Hirudinea). 3972
- ## Emydura macquari sp. n. 3972
- ## Emys. 8126
- ## Emys orbicularis. 5614, 7150
- ecology, Poland. 4253
light. 5144
- ## Enchodus lewesiensis, fossils, Turonian, Texas. 9028, 9029
- ## Enchodus longipectoralis, Cretaceous, Brazil. 7391
- ## Enchytraeidae, key to European littoral spp. 137
- ## Enchytraeus albidus. 7701
- ## Enchytraeus coronatus, life history and metabolism in percolating filter. 653
- ## Encystment,
- in *Fabrea salina*, as affected by salt cone. 618
lysosomal activity and *Hartmanella castellanii*. 3886
- ## Endeidae, Ross Sea. 1965
- ## Endolocrinus pennsylvanicus. 8702
- ## Endemic species, Aves, Hawaii. 3542
- ## Endochiron. 8622
- ## Endocladia. 6728
- ## Endocrine organs,
- anatomy of hypothalamus, *Notothenia*, *Harpagifer*. 4419
androgen glands, *Rhithropanopeus harrisi*. 4082
endostyle, *Branchiostoma lanceolatum*. 4205
Nereis diversicolor. 3968
ultrastructure, adenohypophysis, *Delphinus delphis*. 4258
- ## Endocrinology,
- Mugil*. 3042
pineal organ, Amphibia. 8741
- ## Endocytosis, induced in *Carassius auratus*. 399
- ## Endogenous 'light-on' rhythm, respiration, *Lemna gibba*. 7604
- ## Endopeptidase,
- evolution. 179
evolution, *Astacus*. 6961
evolution, *Sepia officinalis*. 6161
specificity evolution, *Astacus*. 179
- ## Endophytes, *Acrocheatium* spp. 3263
- ## Endoplura aurea gen. et sp. n., California. 4699
- ## Energetics, *Pyrrhosoma nymphula* larvae. 2727
- ## Energy, (see also Metabolism)
- changes in force-velocity of frog muscles, *Rana temporaria*. 5121
- ## Energy budgets,
- fresh-water, *Corethra*. 4987
Hubbard brook, effects of forest cutting and herbicide treatment. 6614
Leptodora kindtii. 1672

- Energy budgets, contd.**
 marine. 4306
 nitrifying capacity, Finnish lake and rivers. 6618
 salt lakes. 1687
 tidal-flat population of *Scrobicularia plana*. 7091
- Energy flow.** 5561
 aquatic environment, India. 5522
 chlorophyll, *Anacystis nidulans*. 8302
 effects of acids, *Scenedesmus*. 5727
 effects of cycloheximide on metabolism, *Euglena gracilis*. 5762
 Hydra. 8471
Lucioperca lucioperca larvae. 4415
 Marion Lake, British Columbia. 3073
Pontogammarus maeoticus, Sea of Azov. 4963
 Sphaeriidae, White Sea. 4162
 temperature effects on oxygen requirements. 5568
- Engalina.** 5551
- English Channel,** Ectocarpaceae of. 55
- Engraulidae,**
 distribution, Indian Ocean. 4354
 hypobranchial apparatus anatomy. 6395
 taxonomy, Florida. 6389
- Engraulis.** 4304, 5188
- Engraulis encrasicolus,**
 immunogenetic differences between populations. 6394
 larva. 819
- Engraulis japonica,**
 length/frequency distribution. 2969
 parasitized by *Callotetrarhynchus* sp. 1170
- Engraulis mordax.** 4522
 fishery, California. 6390
 immunology and genetics, Black Sea and Sea of Azov. 6393
 influence of dissolved oxygen and carbon dioxide on schooling behaviour. 6391
- Engyprosopon longipelvis** sp.n. 7412
- Engystomops pustulosus,** localization of RNA. 3507
- Enophrys bubalis.** 7354
- Enoplolaimus denticulatus** sp.n. 5921
- Enoplometopus antillensis,** distribution, Brazil coast. 3392
- Enoplometopus dentatus,** taxonomy. 3392
- Enoplometus callistus** sp.n., Gulf of Guinea. 7763
- Enoploteuthis chumii.** 7897
- Ensatina eschscholtzi,** serum albumin heterogeneity, Pacific coast. 5088
- Ensidens ingallsianus,** morphology, Thailand. 4150
- Ensis directus,**
 foot withdrawal. 7081
 mechanoreceptors function, foot withdrawal reflex. 7079
 motor aspects, foot withdrawal reflex. 7080
- Enterobacteriaceae,** influence of water aeration on species composition. 3297
- Enterobryus helocharei.** 6814
- Enteromorpha.** 5622, 8281
 acrylic acid. 5688
 distribution-geographical, Korea. 3237
 micro-environment inside tubes. 7835
 ultrastructure and biochemistry of zoospores. 4670
 zoospore adhesion enzymes. 4671
- Enteromorpha compressa.** 4602, 8277
- Enteromorpha linza.** 6784, 8328
 excreting algal growth stimulating substances. 1052
- Enteromorpha prolifera.** 4602, 8277
- Enteropneusta,** structure of nerve fibre and neurocord. 4211
- Enterozoa.** 7656
- Entobdella soleae,**
 spermatophore transfer, parasite of *Solea solea*. 8502
 ultrastructure and function of adult epidermis. 8501
- Entoconchidae,** unisexuality. 2750
- Entocytherinae.** 6063
- Entomology,** Israel. 6067
- Entomostraca,** distribution, Tyrrhenian coast. 3979
- Entophysalis deusta.** 3790
- Entoprocta.** 8241
Barentsia gracilis. 3947
 Isle of Man. 5057
- Entosphenus japonicus.** 6355
- Entosphenus reissneri.** 6355
- Environment,** (see also **Ecology**)
Excirolana spp, Atlantic. 4927
- Environmental factors,** responses by *Haustoriidae*. 1248
- Enzymes,** (see also **Physiology,** and under specific enzyme names).
 adhesion of zoospores, *Enteromorpha*. 4671
 analysis, *Halocynthia aurantium*. 8730
 and chromosomes, sticklebacks. 2321
 aquatic poikilotherms, effect of temperature. 1919
 axonemes, *Pecten irradians*. 7890
Chlorella. 7518
 clearing and staining, fishes. 3555
 Crustacea. 661
 Cyprinus. 8125
 degradation, frogs eggs. 5112
 deuterium effects in enzymatic transamination, *Scenedesmus obliquus*. 8368
 effect of metal pollution, *Fundulus heteroclitus*. 8203
Euglena gracilis. 2538
 evolution, *Catostomus* spp. 8133
 ferredoxin-catalyzed, *Bumilleriopsis filiformis*. 8311
 functional significance in thermal acclimatization. 5309
 histochemistry, *Rana esculenta*. 8766
 hydrolysis of myoglobin with cyanogen bromide, *Delphinus delphis*. 7216
 immunology of trypsin and protease from 3 decapods. 1233
 induction, *Chlorella pyrenoidosa*. 7516
 inhibition by polyoxin D, *Neurospora crassa*. 5804
 inhibitors, pterins, *Artemia salina*. 7713
 inhibitory effects of parasite extracts, Pisces. 8509
 intracellular localization, crayfish. 4950
 isozyme polymorphism, *Mysis relicta*. 1258
 lactate and succinate, invertebrates. 3315
 lobster. 4933
 localization and function, *Rana esculenta*. 4229
 lysosomes and secretory granules in transplanted salamander pars distalis. 6232
 lytic activity of egg-membrane lysis, *Tegula pfeifferi*. 7055
 metabolism of ketone bodies, *Orconectes limosus*. 4951
 nitrate reduction system, *Chlorella*. 5714
 ornithine cycle, Gastropoda. 1989
 oscillation of regulatory processes, *Acetabularia*. 7505
 oviduct, *Triturus cristatus*. 5127
 pentose phosphate cycle, of *Homarus*, *Cyprinus*, *Esox* and *Rana*. 2062
 6-PGD, α -GPD, *Katsuwonus pelamis*. 9012
 phosphatases, urease, dehydrogenase, *Blepharisma*, *Spirostomum*. 5832

Enzymes, contd.

- purification and properties of phosphoenolpyruvate carboxylase of *Euglena gracilis*. 1079
- regulation of DNA synthesis, *Chlorella*. 7511
- respiratory, thermal composition in *Carassius*. 865
- Salmo*, *Coregonus*. 8107
- Salmonidae. 8090
- skeletal muscle, *Rana esculenta*. 8767
- temperature effects, *Phoca vitulina*. 7222
- variation between syngens, *Paramecium aurelia*. 7640
- zinc enzymes, *Crassostrea virginica*, North Carolina. 4143
- Eocene**, a rust and an alga from Western Kentucky. 1117
- Eolidacea**, (see also **Eubranchidae**).
Tanzania. 7843
- Epelobates**, taxonomy, Eocene, Oligocene, North America. 7159
- Eopsetta grigorjewi**, age and growth, Japan. 7392
- Epacanthion enoploidiformis comb.n.** 5921
- Epacanthion gorgonocephalum sp.n.** 5921
- Epacanthion oliffi**. 5921
- Ephemerella rotunda**, mortality at dissolved-oxygen concentrations. 1698
- Ephemeroptera**. 5306
Amur River. 7823
classification. 7822
distribution, South Africa. 8608
Lake Chad. 3427
Lapland. 4980
Lincolnshire, UK. 2724
new spp, Czechoslovakia. 2715
origin and evolutionary tendencies. 4098
- Ephydatia**. 4826
ultrastructure of epithelia. 3905
- Ephydatia fluviatilis**. 6881
cell differentiation of gemmula. 6887
from Bismarck Archipelago. 3907
pattern-formation and developmental physiology of epithelia. 3906
physiology. 6881
- Epiobionts**,
Chalk Point Maryland, pollution effects. 5583
Littorina spp. 4124
Macrocystis. 8376
Nereocystis lueketeana. 8386
zoocenosis on stems of aquatic plants, Danube Delta. 8423
- Epibulus insidiator**, distribution, India. 8168
- Epicarids**, twin species. 1895
- Epidemics**, cholera in Kedah River. 8405
- Epidemiology**, of marine vibrios pathogenic to fish. 1113
- Epidermis**,
fish. 3047
regeneration of complete Hydra from isolated epidermal explants. 5873
tentacles, histology, *Patella vulgata*. 7050
- Epididymis**, tests for alkaline phosphatase and mucopolysaccharides in, *Hirudinaria granulosa*. 141
- Epigomphus**. 7001
- Epinephelus**. 5173, 6371
responses to sounds, Bahamas. 4296
- Epinephelus malabaricus**, giant specimen, Goa coast. 8148
- Epinephelus melanostigma**. 6488
- Epinephelus morio**. 7269
ecology, Gulf of Mexico. 6496
- Epinephelus undulosus**. 5172
- Epistylis galea**, ecology. 6848
- Epistylis horizontalis**, distribution, New York Harbour. 4020
- Epistylis nigrellii sp.n.**, New York Harbour. 4020
- Epithelia**, pattern-formation and development, *Ephydatia fluviatilis*. 3906
- Epitonium (Cinctiscala) eusculptum**, spermatozoa. 1984
- Epitonium (Cinctiscala) eximium**, spermatozoa. 1984
- Epizoanthus marioni**. 3913
- Epoxy resin cements**, *Busycon canaliculatum* tagging. 4115
- Eptatretus deani**, distribution, British Columbia. 4286
- Eptatretus stoutii**, ultrastructure of erythrocytes. 8060
- Epuraea guttata**. 8614
- Equator**, phytoplankton. 1654
- Equipment**,
dissolved oxygen. 3762
for obtaining axenic cultures, algae. 3285
probe, digital and analogue record, oxygen temperature, sea water. 5598
- Eretes**. 3732
- Erethistoides montana**, skull. 7326
- Eretmochelys l. imbricata**, unrecorded W. Indian nesting sites. 779
- Ergasilus**, taxonomy and keys. 5969
- Ergasilus cerastes**, sp.n., North America. 5971
- Ergasilus confusus**. 6518
parasite in *Perca fluviatilis*, Lake Ontario. 7730
- Ergasilus cyprinaceus**, sp.n., Alabama. 5970
- Ergasilus lucioperca**, males, in plankton sample Newfoundland. 1216
- Eridacnis**. 4270
- Erimacrus isenbeckii**, starch gel electrophoresis of haemocyanin pigments. 1244
- Eriochelir sinensis**,
isosmotic regulations surviving nerves. 3393
osmotic concentration of blood. 4041
osmotic stress modification of amino acid pool in blood. 8578
- Eriphia spinifrons**, rhythmogenesis in nerve fibres. 6015
- Erismatopterus**. 5205
- Erosaria helvola**, dorsal markings. 7861
- Erositis**. 4977
- Erpobdella octoculata**. 3946
host to *Microsomacanthus parvula*. 138
- Erpobdella punctata**. 4871
ecology and behaviour. 4873
- Erythrodermis allenii**. 8389
- Erythrodermis pacifica sp.n.** 6726
- Erythroopsis pavillardii**, morphology and ultrastructure of trophont. 7635
- Escenius pulcher**. 8163
- Escherichia**. 3726, 0806, 7007
- Escherichia coli**. 3300, 6721, 8118, 8871
accumulation and elimination by shellfish. 260
accumulation by *Mercenaria mercenaria*. 4152
bactericidal effects by *Scirpus lacustris*. 2563
rate of sedimentation. 72
temperature tolerance. 7572
treated sea water. 4554
- Eschrichtius gibbosus**. 7218, 7269
- Eschrichtius robustus**,
boring barnacles, California. 8845
Japan. 8844
- Esocidae**, artificial feeds, Pennsylvania. 4317
- Esox**. 5339
crystallization on muscle aldolase. 6398
detector properties of ganglion cells of retina. 6400

- Esox**, *contd.*
 embryology. 6452
 intracellular polarization of horizontal cells of retina. 6399
 survey, South Africa. 5271
- Esox houttuyni**. 5438
- Esox imperialis**. 5438
- Esox lucius**.
 3566, 3608, 5565, 6650, 8084, 8086, 8860.
 activity periods, Lake Heming. 4319
 effects of oxygen on growth and food conversion. 6397
 environmental influences on development, South Dakota. 6396
 growth in Polish rivers. 831
 haematology. 7274
 hook avoidance. 5267
 olfactory organ. 811
 pentose phosphate cycle enzymes. 2062
 purines responsible for silvering. 813
 skin. 2970
- Esox marinus**. 5438
- Esox marisrubri**. 5438
- Esox niger**, stomach content and length-weight relationships, Mississippi. 5268
- Estemascidia herdmanni**, taxonomy, ecology. 7942
- Esterase**,
 Clupea muscle. 824
 isozymes genetics, Fundulus heteroclitus. 8204
 kidney, Amphibia. 6263
 polymorphism, Clupea harengus. 8094
 polymorphism, Katsuwonus pelamis. 9013
 spinal cord, Cyprinus carpio. 8139
- Esters**,
 wax, in copepods. 3992
 wax, of Mugil and Trichogaster roe. 443
- Estuaries**,
 amino acids. 5816
 bacteria in sediments. 7568
 Chesapeake Bay, Foraminifera. 1830
 degradation of 1-naphthol in sea water. 7876
 diatoms as indicators. 1659
 dissolved chemicals, Chikugogawa River. 6626
 effects of NTA on phytoplankton. 9089
 effects of pesticides on organisms. 9067
 effects of radiation on organisms. 9066
 frequency of abnormal fishes, Georgia. 8862
 microfauna study. 7445
 Mollusca. 5029
 pollution. 8254, 9065
 pollution, Baltic. 5578
 pollution monitoring. 6676
 Portugal, primary production. 1679
 Rhine, Meuse and Scheldt, Dreissenidae. 2791
 Tamar, surveys. 3743
 Wak goldmanni, Indian Ocean. 6534
- Etheostoma ditrema**. 6320
- Etheostoma (Oligocephalus) collettei**, sp. n., from Louisiana and Arkansas. 890, 5394
- Etheostoma olmstedii**, gill deformity, Newport New City. 7356
- Etheostoma trisella**, distribution, Tennessee. 7357
- Ethiopian region**, Coleopteran larvae. 2714
- Ethmodiscus**, ecology, Tahiti. 8315
- Ethmodiscus appendiculatus**, comb. n., Tahiti. 8315
- Ethmodiscus gazellae**, Tahiti. 8315
- Ethology**, (see also Behaviour)
 Gyrinoidea. 1954
 teaching, use of aquarium. 3028
- Etroplus maculatus**,
 development of motor patterns in parent contact. 8988
 recognition of parents by young. 6497
- Euastrum**. 3817
- Eubalaena glacialis**, fatty acid chromatography. 8846
- Eubothrium crassum**, parasites, vermifuge. 4335
- Eubbranchidae**, Tanzania. 1985
- Eubbranchus**, diagnosis of European spp. 722
- Eucalanus bungii**. 4893
- Eucalanus subtennis**, nutrition, Guinea Bay. 8548
- Eucarida**, Scilly Isles. 4905
- Eucaryota**, origin of the cell. 1014
- Euchaeta japonica**,
 acid-soluble nucleotides. 2631
 chemical factors affecting early development. 156
- Euchaetidae**, genital complex. 1889
- Eucheuma**, gelling agent. 4733
- Eucheuma spinosum**, dessert gel, compositions using extracts. 5741
- Euchirella**, distribution, Izu region. 4005
- Euchirella acuta** sp. n., Pacific Ocean. 4004
- Euchlorophyceae**. 5497
- Euclichthys**, taxonomy. 7344
- Eucodonium brownei**, budding. 3328
- Eucopia**. 5513
- Eucricotopus sylvestris**. 6612
- Eucypris**. 4975
- Eudactylina aspera** sp. n., Australia. 4890
- Eudactylina papillosa** sp. n., Australia. 4890
- Eudactylinidae**,
 Australia. 4890
 Copepoda of New Zealand. 5975
 parasites, New Zealand. 5975
- Eudendrium racemosum**, blastostyle development and spermiogenesis. 4843
- Eudiaptomus gracilis**. 4491
- Eudontomyzon mariae**, taxonomy. 4287
- Eudorella**. 7740
- Eudyptula minor**, captive penguins. 8821
- Euglena**. 3849, 5711
 culture, temperature-synchronized. 1795
 effects of actinomycin D and cell division chloroplast development. 1090
 effects of streptomycin on dividing. 5758
 induction of tRNA, by light. 3286
 mechanism and computer simulation of phototactic accumulation, in beam of light. 7548
 phasing of cell division, culture. 7550
- Euglena acus**, morphology, New Zealand. 4734
- Euglena gracilis**. 5924
 absence of fluorescence quenching in photosynthetic mutant. 583
 action of streptomycins on chloroplast system. 3845
 action spectrum of photosynthesis. 4737
 analysis of RNA. 3847
 antibiotic induced changes in plastid system. 8395
 biosynthesis of galactolipids. 8397
 biosynthesis of monogalactosyl diglycerides. 1078
 cytochrome complement. 3843
 disintegration of cells. 3831
 effect of antibiotics on chloroplast and mitochondrial development. 1076
 effect of chloramphenicol. 3848
 effect of cycloheximide on chloroplasts. 6799
 effect of cycloheximide on energy metabolism. 5762
 effect of drugs on lipid synthesis. 7552
 effect of manganese-deficiency. 4736
 effect of nalidixic acid on plastids. 8399

Euglena gracilis, contd.

- electron transport. 3843
- enzyme chains. 2538
- excision of methylguanine from DNA. 5761
- functional site of manganese in photosynthesis. 4738
- glucan hydrolases. 4740
- glucan hydrolases, purification. 4741
- glucose-6-phosphate dehydrogenase. 3846
- growth during division cycle. 2539
- inhibition of cell division by cysteamine and cysteamine. 1091
- insensitivity to UV-light, photosynthesis. 7549
- light induced glucan breakdown, associated with chloroplast differentiation. 8398
- nucleus isolation. 4742
- phosphorylation sites. 3843
- photosuppression of photo-tactic activity by blue light. 584
- photosynthesis. 7553
- purification and properties of phosphoenolpyruvate carboxylase. 1079
- pyruvate kinase regulation. 62
- regulation of glucose-6-phosphate synthesis in relation to culture conditions. 1077
- rhythmic settling induced in cultures. 7551
- ribosome and RNA. 4739
- ribosome characterization. 7554
- structural changes when grown with DCMU. 1088
- terminal oxidase. 3844
- trehalose phosphorylase. 7555
- ultrastructure. 8396
- Warburg effect. 4735
- water solubilization of cholesterol. 5759
- Euglena granulata**, microtubule structure. 1794
- Euglenoidina**,
 - parasites. 6851
 - taxonomy. 6849, 6850
- Euglenophyceae**. 3192, 7428, 7434, 7488.
 - Minnesota. 5754
 - temporary basin for flora, Bulgaria. 8392
 - Vietnam. 27
- Euglypha leclerqui sp.n.**, Iceland. 3316
- Eugonophyllum**. 5629
- Eugyra glutinans**. 4533
- Euliodrilus bavaricus**. 6929
- Eukrohnia minuta**, sp.n., Indian Seas. 7930
- Eulalia**, role of proboscis. 5937
- Eulalia viridis**. 7089
 - prepharyngeal masses. 6922
- Eulimnadia antlei**, egg shell functions. 7722
- Eulimnogammarus toletanus sp.n.**, Spain. 7764
- Eumecichthys fiski**, Pacific and Indian Oceans. 9030
- Eumetopias jubata**. 7223
 - visual acuity. 8025
- Eumicrotremus orbis**, sexual dimorphism. 4407
- Eumapius nitens**, Cameroon. 4828
- Eumice australis**, Stewart Island. 4527
- Eumicella stricata**, influence of light on O₂ consumption. 7668
- Eumotia americana var. asiatica var.n.** 7495
- Eumotia pectinalis var. minor**. 3792
- Eumotia serpentina**. 5673
- Eumotia sudetica var. pseudo-impressa**. 7494
- Eupagurus**. 4915
- Euphausia**, proximate and lipid analysis. 5514
- Euphausia distinguenda**. 8165
- Euphausia eximia**. 7747
- Euphausia pacifica**, body nitrogen and nitrogen excret-

ion. 1921

- Euphausia superba**,
 - luminescence, Antarctic. 4926
 - phytanic acid. 1909
- Euphausiacea**. 6605, 9052
 - ecology. 6016
 - ecology, Cape Verde islands. 7747
 - ecology, Madagascar. 5510
 - Hokkaido, Japan. 3069
 - vertical distribution, North Sea. 6017
- Euphotic zone**, microbial biomass, North Pacific sub-arctic. 8403
- Euphyllax dovii**, tropical Pacific. 7802
- Euphysa**, Arctic Ocean. 4832
- Eupleura caudata**, physiology. 8654
- Euplotes**. 3720
 - ciliary orientation. 1833
 - polytene chromosome and nucleic acid metabolism. 6852
- Euplotes zenkewitchi**. 7627
- Euproctus montanus**,
 - host to Acanthocephalus and Brachycoelium. 764
 - host to Brachycoelium salamandrae. 3939
- Eurnestinia**. 3940
- Europe**,
 - aquaculture development. 3557
 - aquaculture of fish. 3566
 - distribution and dispersal of Parastenocarididae. 1219
 - fish diseases in warm-water ponds. 3570
 - larval Corixidae. 2722
 - Parapsectra nana and Parapsectra uliginosa spp. n. 1959
 - Rheocricotopus sp.n. 3430
 - weed control in ponds. 3562
- Eurycea**, dispersion patterns along brook. 4218
- Eurycercus lamellatus**, ecology, Lake Naroch. 8542
- Eurydice affinis**, intertidal distribution, British Isles. 6970
- Eurydice pulchra**,
 - intertidal distribution, British Isles. 6970
 - swimming rhythm. 4042
- Eurypharynx pelecyanoides**, Hispaniola Basin. 6554
- Eurypon**. 4824
- Eurystomina terricola**, British Isles. 2598
- Eurytemora**, growth and culture. 5972
- Eurytemora affinis**. 5961
- Eurythoe complanata**, ultrastructure of nuchal organs. 1193
- Eusimulium**, keys to larvae, Yemen. 8625
- Eusiroides diplonyx**, Gulf of Mannar and Palk Bay. 4028
- Euspongia officinalis**. 6883
- Eusyllis blomstrandii**. 3977
- Euterpina acutifrons**. 5959, 6703
- Euthalenessa**, taxonomy. 7704
- Euthynnus affinis**. 7377
 - distribution, Hong Kong. 6538
 - hydrostatic equilibrium. 4438
- Euthynnus affinis affinis**, parasitism by Caligus krishnai sp.n. 3993
- Euthynnus alletteratus**. 6539
- Euthynnus lineatus**. 9010
- Euthynnus pelamis**. 7379
- Eutima commensalis sp.n. (Hydromedusae)**, India. 5868
- Eutrophication**. 8234
 - algal blooms. 3760
 - aquaculture, Tilapia, Malacca. 3675

Eutrophication, contd.

- bacteria and algal blooms. 3760
- ciliates of a eutrophic pond. 2567
- control by plant harvesting. 9055
- Crecy Lake. 4509
- lake, Canada. 3082
- Lake Vättern, Sweden. 1683
- Long Island, New York. 2438
- Oslofjord. 6673
- phosphates. 3133
- Wahner Heath ponds. 4510

Eutropiichthys vacha, host to *Neocamallanus vachaii*. 134

Evadne nordmanni, distribution, western Mediterranean. 3987

Evechinus chloroticus, association with *Dellichthys morelandii*. 4447
covering response. 8717

Evermannellidae. 7232

Evolution,

- a concept concerning some sessile and tubiculous spp. 613
- Acestrorhynchini**. 5316
- adaptations of Neotropical Amphibia. 5069
- adaptive ecology of *Leptodactylus* spp. 765
- and quantitative phyletics, Anura. 5070
- Archiamelida**. 4872
- Baetidae**, **Siphlaenigmatidae**. 4098
- Blicca**, **Abramis**. 8128
- Calcarea**. 7655
- Carditacea**. 7878
- Centrarchidae**. 8158
- changes in DNA, content of cell nuclei, vertebrate. 8732
- Characoidiae**. 5335
- Chlorogonium**, **Hyalogonium**. 5718
- chromosomes and speciation, *Salmo salar*, North Atlantic. 7289
- effect of predators, *Gasterosteus aculeatus*. 5450
- elasmobranchs. 350
- higher plants, role of anaerobiosis. 610
- Hydromantes** spp. 4990
- Lacertilia**. 8009
- Lycoptera**, **Hiodontidae**. 7275
- molecular evolution, population genetics. 4357
- morphological, of *Leptodiscinae*. 588
- muscular, **Hemichordata**. 8725
- neoplasia and vertebrate phylogeny. 4569
- nuclear envelope during sporogenesis, *Noctiluca miliaris*. 5767
- ontogeny quality, fish. 4269
- Paracanthopterygii**. 5205
- phylogenetic relationships of **Procaryota** and origin of eukaryotic cell. 1014
- plankton. 7427
- pluriphyletic origin of the **Cetacea**. 4350
- Porifera**. 6870, 7654, 7656, 7657.
- Proterosuchia**. 8006
- relationship, *Fundulus* spp. 5448
- relationship, **Trematopsidae**, **Dissorophidae**. 5087
- reproductive stasis, *Asellus aquaticus*. 4912
- Salmonidae**. 8091
- snakes. 8804
- Spondylus*, Palaeogene, Veneto. 4164
- Tanaidacea**. 4972
- Tarsonemida**. 4994
- utilization of molecular hydrogen by *Chloropseudomonas*. 6811

vision organs. 612

Ziphiini. 6318

Excrolana spp., distribution, Atlantic. 4927

Excorallana berbicensis, French Guiana. 4043

Excretion,

- by macrophytes in hard-water lakes. 2560
- carbohydrate by *Nitzschia closterium*. 3810
- dissolved organic phosphorus, phytoplankton. 5504
- Dreissena polymorpha*, rhythms. 2008
- glycerol by nematodes. 1866
- K by bladder of *Bufo marinus*. 298
- kidney, water snakes, *Pituophis*, *Natrix*. 3534
- magnesium by *Carcinus*. 1236
- nitrogen, in *Neomysis* and *Euphausia*. 1921
- N₂, in *Lepomis macrochirus*. 899
- N₂ products and enzymes in **Cirriiformia**. 652
- osmotic regulation and urea metabolism in *Negaprion brevirostris*. 356
- urea formation, *Ochromonas malhamensis*. 8319
- Xenopus laevis*, of blood ammonia. 2068

Excretory enzymes, **Cirriiformia**. 652

Excretory organs,

- extent to which primary ureter is inducing agent on mesonephros, Anura. 5080
- kidney, glucuronidase histochemistry, *Rana tigrina*. 8779
- kidney, histophysiology, **Gastropoda**. 8646
- nephridia, filling of the vesicle by the ampullae in *Paramecium*. 1160
- nephridia, histology, *Quadrula nodulata*. 7873
- protonephridia, ultrastructure, *Asplanchna*. 7696
- ureter, cell migrations, Anura. 3506
- urinary bladder role in water balance, *Ambystoma mexicanum*. 5074

Excretory products,

- hypo-osmotic urine, *Nereis diversicolor*. 7707
- ureogenesis, *Chelonia*. 7204

Exocoetidae, Indian Ocean. 9015

Exocoetus volitans, retina. 4449

Exonuclease, *Oncorhynchus tshawytscha* testis. 5277

Exopeptidase, *Gammaurus*, *Asellus*. 6971

Expeditions, subantarctic Campbell Islands. 9134

Experimental animals, *Carcinus maenas*, deficiencies. 2703

Experimental control, columnaris disease, *Oncorhynchus kisutch*. 4326

Exploitation,

- Cynoscion macdonaldi*, Gulf of California. 5393
- effects on lobster stocks, New England. 2648
- Engraulis mordax*. 6390
- population dynamics from a culture of **Calanoida**. 5961

Exploitation of resources, optimum model. 7243

Exploratory fishing,

- bioacoustic investigations, *Clupea harengus*, Baltic Sea. 8903
- Clupea harengus*, West Atlantic. 8902
- echo sounding, western Norway fjords. 8906
- effects of coloured lights, *Pseudorasbora parva*. 6477
- Gadus morhua*, Greenland. 6483
- Merluccius capensis*, southeast Atlantic. 8977
- pelagic fish, Mid-Atlantic Bight. 6329
- shrimps, Alaska. 8556
- tuna, Angola. 6536

Explosive fishing, Philippines. 5170

Extinctions, fossils. 7480

Extraction, yttrium, sea water. 6643

Exuviaella baltica. 8224

***Exuvialia cordata*, physiology and ecology. 1796**

Eyes,

- abnormalities, *Pachydrobia pellucida*. 4128
- adrenergic innervation, 18 species. 1736
- anatomy and histology, *Dialommus fuscus*. 4405
- Aplysia*, electrophysiology. 2001
- binocular neurons, frog. 7966
- biochemistry, *Bufo marinus*. 8750
- changes in ultrastructure of retina during development, bullfrog. 4223
- chromatographic analysis of proteins, Pisces. 8879
- colour encoding, *Procambarus clarki*. 205
- colour preferences, *Rhithropanopeus harrisi*. 6991
- compensatory rotation of eyecup in *Procambarus*. 1272
- compound, arthropod. 2704
- compound, *Dytiscus*. 8624
- conduction mechanism, retina, bipolar cells, frog. 8799
- cone regeneration rates. 2879
- cornea, bound glycans, *Scyliorhinus canicula*. 6369
- cornea externa, regeneration, *Limnea stagnalis*. 5005
- cornea, swelling properties, dogfish. 2946
- cornea, ultrastructure of primary spectacle, *Petromyzon marinus*. 8067
- dark spot receptors, retina, *Rana temporaria*. 8798
- delayed responses, frog retina. 2881
- detector properties of ganglion cells, retina, *Esox*. 6400
- developing retina, ultrastructure and function, *Rana pipiens*. 4239
- discrimination, *Procambarus clarkii*. 6989
- effect of eyestalk removal on ovarian growth in *Scylla serrata*. 209
- effect of UV on RNA synthesis in amphibian lens. 323
- efference copy for movements, *Carassius*. 3628
- electroretinograms, *Salmandra salamandra*. 7999
- Emys orbicularis*. 5144
- evolution of vision organs. 612
- eyestalk histogenesis, larvae, *Lysiosquilla occulta*. 7780
- fish, morphology. 3702
- fluorescent substances in eyes of *Crangon*, *Palaemon* and *Penaeus*. 183
- fovea occurrence, *Lepadogaster candollei*. 4460
- frog retina, massreceptor potential. 2884, 2885
- intracellular polarization of horizontal cells, *Esox*. 6399
- iris cells, ultrastructure, *Triturus viridescens*. 8003
- lens capsule permeability to nuclear eye lens proteins, *Thunnus*, *Katsuwonus*, *Coryphaena*. 7381
- lens, ion restricting membranes, toad. 2866
- lens, K movement, *Amphibia*. 2867
- lens nucleus proteins, *Notodarus hawaiiensis*. 2027
- lenses, distribution of soluble proteins, vertebrates. 7269
- light-induced potentials spread, Teleostei. 6378
- light transmission, fish. 2990
- Limulus* receptor action spectra. 2737
- Limulus*, slow potentials. 1966
- median eye, *Palinuridae*, South Africa. 7751
- mitosis, retina, *Protopterus aethiopicus*. 7416
- musculature, *Argyrolepecus*, *Boleophthalmus*. 8899
- musculature, of cod and burbot. 422
- musculature, *Periophthalmus*, *Chauliodus*. 6512
- nauplius, *Pandalus borealis*. 4953
- oculomotor reactions, *Sepia officinalis*. 5040
- Ocypodidae. 6958
- osmotic composition of ocular fluid, *Bufo marinus*. 8751
- Petromyzon marinus*. 5203
- photoproducts of rhodopsin bleaching, frog retina. 2883
- photoreceptors, osmic staining. 4248
- pineal organ, *Plecoglossus altivelis*. 3616
- Poromitra nigrofulvus* retina. 3053
- preoptic recess organ, vertebrates. 7150
- Rana catesbeiana*, potentials in cornea. 7977
- rectification, goldfish retina. 3004
- retina. 6249
- retina, *Exocoetus volitans*. 4449
- retina, *Fodiator acutus*. 4449
- retina inhibition, dark-adapted frogs. 6250
- retina, systems analysis, *Limulus*. 8638
- retinal screening pigment migration, frog. 2877
- retinal sodium diffusion, frog. 7194
- retinal stimulation, *Solea solea*. 6587
- retinal structure, *Pagophilus groenlandicus*. 6309
- retinal structure, *Sternoptyx diaphana*. 8929
- retinal synaptic structure, *Octopus vulgaris*. 8695
- rhodopsin content, *Rana catesbeiana*. 4225
- rhodopsin, frog. 2880
- rods, amino acid uptake, *Rana pipiens*. 2878
- rod outer segment, freeze-etching. 6246
- rod outer segment, frog. 6247
- rod outer segment suspension, circular dichroism, *Rana temporaria*. 5119
- Salvelinus fontinalis*. 5203
- saturation of S-potentials, Teleostei. 6379, 6380
- single units, ipsilateral tectum receptive field. 4228
- soluble lens proteins, *Amphibia*. 2886
- spectral sensitivity, flicker response, *Squilla* *empusa*. 3381
- spectral sensitivity, *Onchidoris fusca*. 7049
- structure, in *Copilla*. 1224
- thiamine content, *Anura*. 7157
- transplant, *Loligo*. 3485
- ultrastructure, *Cardium edule*. 7879
- ultrastructure of nauplius eye, *Doropygus seclusus*. 7729
- ultrastructure of nauplius eye of *Sapphirina*. 163
- ultrastructure, *Onithochiton neglectus*. 3494
- velocity function of the movement detecting class-2 neurons in frog retina. 322
- visual pigments and ganglion cell activity in *Rana temporaria* retinae. 308
- yellow cornea, fish. 2957
- Eyespots, algae. 517**
- Eyestalk removal, in *Scylla serrata*, effect on O₂ consumption. 1935**
- Eylais,**
 - larvae, parasites of insects, resource partitioning. 7834
 - parasitic on Hemiptera. 2716
- Eylais hamata*, respiratory rates. 4993**

F

Fabracia. 4533

- Fabrea salina**, effect of salt cone on encystment. 618
- Faecal coliform test**, optimum temp. 500
- Faecal pellets**, sinking rate, zooplankton. 1673
- Falkenbergia**, amino acid composition, Mediterranean. 3269
- Far East**,
aquaculture. 3632, 3637
diseases of fish in warm-water ponds. 3573
weed control. 3560
- Fasciola gigantica**, control, Rhodesia. 8504
- Fasciolaria**. 5863
- Fasciolaria tulipa**, parasitism by *Scolex pleuronectis*, Florida. 6902
- Fasting**, of *Lissomyxine exilis*. 2041
- Fats**,
aldosterone effects on sodium transport, ventral skin, *Rana temporaria*. 7994
alkoxylipids and wax esters, eggs, *Mugil cephalus*. 8209
Brevoortia spp. 2962
changes in gonad, *Salmo trutta*. 8926
cholesterol level, relation with age, *Pseudemys concinna*. 8810
chromatography, liver, shark, Japan. 8071
content of *Mallotus villosus*. 832
continuous extraction from fish. 8056
corticosteroid identification, *Rana pipiens*. 7985
densities of marine lipids, hydrostatic agents. 8438
detection of 2-aminoethylphosphonic acid in phospholipids, *Cyclograpsus punctatus*. 8576
effects of high-energy radiation on fish lipids. 6520
fat bodies, *Rana esculenta*. 3517
fat solvents, in production of marine concentrate. 4276
galactolipids biosynthesis, *Euglena gracilis*. 8397
glycolipids, invertebrates. 7617
lipid compositions, seasonal variations, *Sprattus sprattus*. 8116
lipid levels, *Leiognathus splendens*. 4411
lipids in neurons, *Anodonta cygnea*. 7069
lipids, *Neptunea arthritica*. 3445
lipids, *Protosiphon botryoides*. 4680
phospholipids in membranes, *Carassius auratus*. 6449
phosphonolipid biosynthesis. 6096, 6097
reaction of lipoxidase with polyenoic acids in marine oils. 8054
sperm whale head oil, ester fraction. 6315
sphinga-4,8-dienine, glycolipid, oyster. 8671
steroid glycoside characterization, *Marthasterias glacialis*. 6179
steroids, transformation, *Stannius corpuscles*, *Salmo gairdneri*. 6429
total lipid determination, fish meal. 6342
wax esters, biosynthesis, fish. 3032
- Fatty acids**,
Abramis, *Lucioperca*, *Rana*. 7299
n-alkane assimilation, *Pseudomonas*, Helgoland. 8414
as model systems for action of *Ricinus* leaf extract on algae. 1774
Balaenoptera physalus, Pisces. 8987
biochemical origin of hydrocarbons. 6601
carp. 5340
Cephalopoda. 4171
changes, *Chlorella*. 4659
Clupea harengus, Baltic Sea. 4315
composition, *Halosphaera viridis*. 7559
composition, *Orconectes limosus*. 4949
crayfish. 4950
Cryptomonas ovata var. *palustris*. 582
distribution, *Chlorella vulgaris*. 8351
effects on metabolism, *Ambystoma tigrinum*. 3503
Eubalaena glacialis. 8846
fat bodies, *Rana esculenta*. 3517
formation in frozen *Salmo*. 854
free, glycaemic and plasma, affected by asphyxia and exhaustion in carp. 407
herring oil. 361
Hypomesus olidus. 3609
lotic periphyton. 1739
Mallotus villosus during freezing. 833
metabolism, *Mirounga leonina*. 333
Neomeris phocaenoides, oil. 2905
Peponocephala electra, oil. 2910
polyunsaturated, phylogenetic significance in aquatic fungi. 78
recovery from marine organisms. 6722
Seriola quinqueradiata. 5414
Teleostei. 5442
temperature effects, *Carassius auratus*. 6444
temperature-induced cell-surface deformation reversal, *Tetrahymena*. 4821
- Faucheria**. 7808
- Fauna**,
crayfish, Australia. 3391
Florida Bay. 7797
Lake George, Uganda. 3725
pollution effects, Santa Barbara Channel. 5594
pollution, Sargasso Sea. 5595
rhopic factor importance, marine environment. 3744
survey, Andriandrano River. 3729
- Favosites**. 7665
- Fecundity**,
Artemia salina. 7714
Dorosoma cepedianum. 2968
Eleginus navaga, egg quality in relation to progeny number. 8975
factors inducing, Crustacea. 5946
Gobio gobio, River Thames. 3001
Mordacia. 805
Mytilicola orientalis. 670
Pasiphaea multidentata. 699
Perca fluviatilis, in the Kličeva water reservoir, Czechoslovakia. 440
Pontogammarus robustoides. 4076
Roccus americanus. 5407
Salmo irideus, selection of aquaculture. 6431
Sebastodes. 6525
Stizodion vitreum, Lake Erie. 910
walrus. 7226
- Feeding**, see food and feeding.
- Feeds-artificial**, see Artificial feeds and feeding.
- Fenneropenaeus**. 6044
- Feresa attenuata**, distribution, behaviour, southern Africa. 6304
- Ferritin**, crystallization from coelomic fluid of *Corbicula*. 732
- Fertilization**,
changes in RNA in eggs, sea urchin. 7908
control of respiration by ADP, sea urchin. 5055
diffusible factor, *Bufo arenarum*. 8746
Echinus. 4182
effects of delay, *Oncorhynchus*. 6421
enzyme release, *Anthocidaris crassispina*. 5042
fertilization membrane, *Strongylocentrotus purpuratus*. 6181, 6182

Fertilization, contd.

- Fucus distichus*. 8374
- isolation of hyaline layer protein, eggs, sea urchin. 6174
- Jasus lalandii*. 4938
- kinetics, *Echinus*, *Psammecinus*. 5050
- mechanism, *Palinuridae*. 6981
- Mytilus*, male pronucleus. 3468
- Mytilus*, polar body formation. 3467
- nicotine effects, *Arbacia punctulata*. 8708
- of trout eggs with cryo-preserved sperm. 380
- Panulirus homarus*. 3417
- Planaria*. 8486
- Polysiphonia* hybrids. 6790

Fertilizers and fertilization of habitats.

- carbon sources in fish ponds. 2380
- Crecy Lake. 4509
- effect on primary production. 3079
- fertilizer production from seaweed. 4601
- fish ponds. 2367-2370, 2373, 2381, 2488.
- Florida trash fish. 7245
- inorganic fertilizers in fish ponds. 2377, 2379, 3594.
- manganese in fish ponds. 2375

Field frequency, effect on regeneration axis of *Dugesia*.

- 643

Fiji, *Demospogoniae*. 3908

Filinia terminalis, ecology, Canada. 3715

Filtering rate, relation with temperature and body size

- of *Daphnia*. 1880

Filters,

- anaerobic filter. 3156
- factors effecting retention of DNA. 5310
- fast-flow sealed disc filter system, aquaria. 2444
- microplankton, new bucket. 3055
- reliability of data from direct bacterial counters. 5783
- retention of marine particles. 2443

Fimbria, sole representative of *Fimbriidae*. 7082

Fimbria fimbriata, morphology. 8673

Fimbriaria. 8579

Finland,

- algae, checklist. 3789
- dispersal of *Arctocorisa* and *Callicorixa*. 1947
- Kyrösjärvi lakes, limnology and microbiology. 1686
- lake Langelmavesi, zooplankton. 2359
- lake Vesijärvi, vegetation. 1139
- meromictic lake, *Chrysophyceae*. 1038
- Oligochaeta*. 1871
- Polydora* (*Boccardia*) *redeki*. 1875
- River Kokemaenjoki, bottom fauna. 3118
- River Teuronjoki, relation of aquatic vegetation to water velocity. 1138
- rotifers. 2601

Finmark, halibut fishery. 3019

Fins, elasticity, *Phocaena*. 6310

Fish,

- anaesthesia and killing methods. 344
- and salmonella. 1722
- antigens and allergens. 346
- Apiosoma* from freshwater species, USSR. 94
- bibliography on blood chemistry. 345
- commercial, from the Mediterranean and Red Sea. 341
- distribution, Sable Island, Nova Scotia. 457
- ecology of freshwater spp. 484
- electrophoretic method for identification. 343
- helminths, Sudan. 124
- microvolt electric signals. 410

- of a small tropical stream. 396
- of the Missouri drainage, Canada. 339
- parasitic ciliates, Lake Seliger. 106
- pH effects, Norwegian lakes. 1695
- school size and migration. 340
- taste buds in oesophagus. 342
- trematodes from gills, India. 125
- Fish bait**, manufacture by fish plants. 4271
- Fish conversion**. 6328, 7245, 8059
 - bait manufacture. 8058
 - baleen whales. 8835
 - Callorhinus ursinus* meat. 8027
 - crab handling. 8570
 - fish meal for chicken feeds. 7247
 - fish protein concentrate as human protein source. 7246
 - fish protein concentrates. 3591
 - liquified fish protein. 8053
 - meal. 6353
 - Pandalus borealis*. 7794
 - Pandalus borealis*, peelability. 3371
 - plants. 5189
 - recovery of oils. 6722
 - Reinhardtius hippoglossoides*. 5474
 - sanitary operation of plants. 8043
- Fish lures**. 8057
- Fish meal**. 6328
 - bacteriological problems. 799
 - dietary supplements for chickens. 7247
 - manufacture. 6353
 - manufacture of defatted fish protein. 4275
 - production for use. 4272
 - total lipid determination. 6342
- Fish meat**, processing. 4274
- Fish processing plants**, prevention of odour, gas diffusion. 5189
- Fish products**. 3591
 - Caribbean. 5175
 - continuous extraction of fats. 8056
 - fish fingers, microorganism content. 3586
 - fish protein concentrates. 4276, 4277
 - fish solubles, microbiology. 8155
 - freeze-dried cod steaks, quality evaluation. 4283
 - liquified fish protein, processing conditions. 8053
 - manufacture of defatted fish protein. 4275
 - production of marine concentrate. 4276
 - protein extraction process. 3592
 - reaction of lipoxidase with polyenoic acids in marine oils. 8054
 - vitamin B components. 8042
- Fish protein**. 5193
- Fish protein concentrate**,
 - Caribbean. 5175
 - continuous countercurrent process. 3591
 - extraction and composition. 884
 - fluoride content determination. 6343
 - isopropanol-water azeotrope as solvent in production from *Clupea harengus*. 827
 - isopropanol-water mixtures in production from *Clupea harengus*. 826
 - weaning infants food, Morocco. 6336
- Fish solubles**. 5193
- Fish technology**,
 - bacteriology and shelf life of canned, pasteurized crab cake mix. 8565
 - cause and mechanism of discolouration of meat. 8564
 - heading and gutting *Mallotus* with special hand shears. 834

- incidence of *Clostridium botulinum* type E in dressed whitefish chubs. 1097
- patented process for production of microbiological peptones from fish meat. 802
- preservation of fresh fish. 800
- pulping and boning fish. 801
- use of sodium tripolyphosphate to control fish shrinkage during hot-smoking. 803
- Fish traps.** 8891
- Fisheries,**
- Alaska pollack, influence, platen temperature, freeze drying, quality. 4393, 4394
- Artemesia longinaris*. 176
- automatic counter for fingerlings. 796
- cod, Barents Sea. 5353
- cod, Iceland. 5350
- cod, west Newfoundland. 421
- commercial exploitation of spiny lobster, Rio Grande do Norte, Brazil. 692
- Danish seine, of *Chionoecetes opilio* in the Japan Sea. 1240
- dynamic force of fish swimming into mesh. 348
- effects of agricultural chemicals. 3593
- eggs and young, Norway coast. 2966
- exploitation effects. 2924
- exploration in the northeast Pacific. 793
- fish feeds containing growth-promoting additive. 347
- fish from the Mediterranean and Red Sea. 341
- Fisheries Division of New Zealand, publications to 1968. 4285
- Gadus morhua* biology, Newfoundland. 4388
- Gadus morhua* stock, Iceland. 5347
- gill-net catches, salmon, Okhotsk Sea. 2960
- halibut, west Finmark. 3019
- heat summation and catch of shrimps. 2665
- holding force of net mesh. 349
- Hirundichthys affinis*, Brazil. 932
- hydrography. 2927
- influence, freezing rate, quality. 4393, 4394
- intraspecific structure. 3012
- Lake Saroma, Japan. 488
- live bait shrimp, Florida. 2694
- Lota lota*, British Isles. 7345
- Macrobrachium lanceifrons*. 2653
- midwater trawl for sampling discrete depth horizons. 798
- muscle damage in *Salmo salar* when caught in nylon gillnets. 385
- Nephrops norvegicus*, Gulf of Gascony. 697
- nucleotide degradation in frozen *Xiphias gladius* muscle. 450
- Pandalus borealis*. 2681
- prawn fishery, mathematical model. 2666
- prawn fishery, Shark Bay, Western Australia. 2670
- prawn resources of India. 2671
- pumping device for collection of *Micropterus fry*. 797
- pumping of *Dorosoma cepedianum* as harvesting method. 795
- pumping of fish in California. 794
- purse seining. 2930
- Reinhardtius hippoglossoides*, Greenland. 2333
- resource estimation, Venezuela. 4279
- sardine fishery, affected by thermal state of Gulf of Gascony. 823
- Sardinops caerulea* and *Brevoortia tyrannus*, Pacific. 2987
- shellfish hatcheries. 2006
- shrimp and prawn, increasing production, Mexico coast. 2696
- shrimp, Brazil. 2677
- shrimp, discarding practices. 2686
- shrimp, Gulf States. 2683
- shrimp, success prediction, Florida. 2689
- shrimp, Venezuela. 2673
- studies on exploited stock of *Hippoglossoides platessoides*. 460
- swimming thrust of salmon in relation to selectivity of gillnets. 375
- Thunnus albacares*, Indian Ocean. 2306
- Thunnus albacares*, Pacific. 3036
- Thunnus atlanticus*, Brazil. 918
- treaties, Canada, USA. 4384
- working time, Alaska pollack fishery. 4392
- year class fluctuation. 2928
- year class studies of haddock, central Scotian Shelf. 426
- Fishery biology,**
- Chionoecetes opilio*. 1239
- Penaeus schmitti*. 2654
- Fishing,**
- cobalt chloride catalyzed. 5182
- explosive, Philippines. 5170
- light fishing, Mediterranean. 4538
- sodium sulphite catalyzed. 5182
- Fishing boats,** *Thunnus atlanticus*, Rio Grande do Norte. 6543
- Fishing effort,** *Gadus morhua*, North Atlantic. 6482
- Fishing industry.** 8059
- accidental fishing of *Phocoenoides dalli*, Japan. 6311
- Africa. 3567
- aging, Otolith punch. 3624
- Anoplopoma fimbria*, California. 8044
- apparatus for packaging fish. 6349
- aquaculture of oysters, Ostend. 7089
- aquaculture, *Salmo irideus*. 6431
- aquaculture, United States. 3565
- Atlantic herring, Norwegian seas. 5236
- Atlanto-Scandian herring, tagging. 5241, 5258
- automation of techniques. 3584
- bacteriological standards. 8871
- Balaenoptera acutorostrata*, Antarctic. 8839
- Balaenoptera borealis*, Antarctic. 8840
- baleen whales. 8835
- Baltic herring fishery. 5252
- Baltic Sea. 5253
- behavioural stimuli importance, Pisces. 8055
- blue whiting stock, Atlantic Sea. 8865
- by-catch. 5179
- California partyboat fishery, 1947-1967. 7244
- Cancer pagurus, Irish Coast. 8570
- catch statistics, Cetacea, 1968-1969. 7230
- Chionoecetes opilio*, Japan Sea. 6968
- Clupea harengus* catch into artificial lights, Atlantic. 8905
- Clupea harengus*, Ireland. 8869
- Clupea harengus*, West Atlantic. 8902
- cod fishery, Arcto-Norwegian waters. 5351
- cod fishery, Greenland. 6483
- cod fishery, Iceland. 5349
- colonization studies, Pelecypoda, Cuxhaven. 6152
- conversion plant. 8043
- Coregonus clupeaformis*, Minnesota. 7273
- Cynoscion macdonaldi*, California. 5393
- danger of poisoning from shellfish. 7058
- demersal stocks, Wadge Bank. 5173
- development, *Opisthonema oglinum*, Florida. 5286

Fishing industry, contd.

- discolouration of frozen meat during defrosting, Thunnus. 7383
- distribution, Clupea harengus, Maine. 6384
- drained weight determination, Cancer magister. 6057, 6058
- effect of oil production, North America. 5176
- effect of oscillation of Kuroshio Front, Sea of Japan. 8201
- efficiencies of ordinary and echo-shooting operations, Kyushu. 7242
- efficiency, Gulf III sampler, Gulf V plankton sampler. 3707
- electrofishing. 6332
- English herring fishery. 5242
- English sprat fishery. 5255
- Engraulis mordax, overexploitation. 6390
- Eopsetta grigorjewi, Japan. 7392
- Euphausia superba, Antarctic. 4926
- Europe. 3566
- fish pump. 6335
- flatfish fishery, Baltic. 5460
- flavouring. 6341
- freeze-drying. 6339
- freezing of organisms. 6517
- freezing of tuna. 7379
- Gadus merlangius, North Sea. 5371
- Gadus merlangius, Scottish west coast. 5370
- Gadus morhua, Baltic. 5356
- Gadus morhua, Baltic Sea. 5357-5360
- Gadus morhua, Bornholm Basin. 5373
- Gadus morhua, Lofoten and Barents Sea. 5352
- Gadus morhua, North Atlantic. 6482
- Gadus morhua, North Sea. 5355
- Gadus morhua, west Scotland coast. 5354
- gear selection, halibut in Pacific. 4385
- German salmon fishery, Baltic Sea. 5290
- gill-nets, Lates mariae, Lake Tanganyika. 6500
- goby-pot, Glossogobius olivaceus, Japan. 8169
- handling and icing halibut on board ship. 5472
- Harpodon nehereus, Hooghly Estuary. 7327
- herring, Atlantic. 5235
- herring fishery, Baltic. 5250
- herring fishery, Iceland. 5233
- herring fishery, Isle of Man. 5261
- herring fishery, Netherlands. 5247
- herring fishery, North Sea. 6383
- herring fishery, Norway. 5240
- herring fishery, Norwegian waters. 5259
- herring fishery, South-west Ireland. 5251
- herring, Germany. 5237
- herring, Iceland. 5234
- herring, North Sea, International Trawling Survey for larvae. 5243
- historical review. 5184
- history, Lake Erie. 5186
- Holothuria, Ceylon. 8718
- hygiene. 8895
- influence of conditions on catch, Kyushu. 7240
- influence of lunar condition on catch, Kyushu. 7241
- Irish herring fishery. 5254
- isotherm maps for tuna fishery, New South Wales. 6535
- Japan. 8048
- landings per unit of effort, Limanda ferruginea, New England. 6567
- Ligurian Sea. 5174
- liquified fish protein. 8053
- lobster fishery, Rio Grande de Norte. 6037
- long-line tuna fishery, Hawaii. 6540
- marine resources, UAR. 5607
- meal conversion. 6353
- Mediterranean long line fishery, Alexandria. 5415
- Melanogrammus aeglefinus. 8147
- Melanogrammus aeglefinus, Arcto-Norwegian waters. 5363, 5364
- Melanogrammus aeglefinus, Barents Sea. 5362
- Melanogrammus aeglefinus, Faroe Islands. 5365
- Melanogrammus aeglefinus, Iceland. 5361
- Melanogrammus aeglefinus, North Sea. 5367-5369
- Melanogrammus aeglefinus, Scottish west coast. 5366
- Merluccius capensis, southeast Atlantic. 8977
- microbial damage of netting yarn. 6345
- midwater trawling, tuna collection, Hawaii. 7377
- Mollusca, aquaculture. 4997
- Mytilus edulis, Ireland. 5026, 8679
- nets, depth-time sequential analysis. 3588
- nets, selectivity. 3603
- northern anchovy live bait. 3607
- Norwegian herring fishery. 5239
- Norwegian herring fishery, North Sea. 5246
- Norwegian herring fishery, North Sea and Skagerak. 5245
- Norwegian herring industry, mature herring industry. 5238
- Oncorhynchus, disposal of sediments, Bellingham Harbour. 5279
- Oncorhynchus keta, use of conditioned reflexes. 8912
- optimizing exploitation models. 7243
- Oregon trawl fishery, mink food. 6328
- Ostrea edulis culture, Galicia. 6149
- otter trawl fishery, Manila Bay. 3595
- otter trawl smelt fishery, Columbia River. 6440
- oyster culture, Long Island Sound. 6136
- oyster farming, Japan. 6135
- Palinurus elephas, Ireland. 8592
- Panama Bight. 5171
- pelagic trawling. 5180
- Penaeidae, USA. 7798
- pilchard fishery, Congo. 4348
- Pisces, Aral Sea. 8864
- plaice, North Sea. 5465
- Platichthys flesus, Baltic Sea. 5461
- Pleuronectes platessa, North Sea. 5465
- Polish herring fishery. 5244
- Polish herring fishery, Baltic. 5249
- pollution, Caspian Sea. 9100
- pollution in inland water. 3776
- population estimates, Gadus morhua, Greenland. 6481
- population estimates, mackerel, Japan. 8160
- population estimates of Thunnus, Indian Ocean. 7384
- population estimates, Pisces. 8973
- preservation, Melanogrammus aeglefinus, irradiation. 5372
- preservation of shrimps. 6997
- prevention of deterioration in Mugil fillets. 3694
- Pseudosciaenidae, Thrissocles, Lactarius, India. 8156
- quality control of salted fish. 6808
- quality improvement of vessel-caught groundfish. 3589
- Reinhardtius hippoglossoides, Barents Sea. 5473

Fishing industry, contd.

- research. 8239
- salmon fishery, Latvia. 5292
- salmon fishery, West Greenland. 8863
- salt measurement. 6337
- saury fishery, North Atlantic. 5475, 5476
- Scomber scombrus, North Sea. 5411
- shellfish, Scotland. 8554
- shrimps, Alaska. 8556
- sprat fishery, Baltic Sea. 5256
- sprat fishery, British Isles. 7297
- surface trawl for tidal marshes. 5181
- Sweden, herring fishery, North Sea, Skagerak, Kattegat. 5248
- Theragra chalcogramma, Japan. 8153
- Thunnus alalunga, Atlantic. 8045
- Thunnus alalunga, New Zealand. 7380
- Thunnus, Atlantic. 5422
- Thunnus atlanticus, Rio Grande do Norte. 6543
- Trachurus symmetricus, California coast. 6532
- trawl fishing, South America. 5177
- trawl industry, Wadge Bank. 5172
- tuna long-line fishery, Japan. 6537
- tuna long-line fishery, longliner manoeuvrability. 5425
- tuna long-line fishery, Sea of Japan, East China Sea. 5423
- tuna purse seine fishery, Angola. 6536
- Wadge Bank trawl fishery, Lethrinus nebulosus. 5397
- whaling statistics, 1967-1968. 7229
- World, problems. 5169
- zooplankton biomass, Arabian Sea and Bay of Bengal. 5506

Fishing nets, protection against microbial attack. 6346

Fissurisepta pacifica sp. n., eastern north Pacific. 231

Fistularia villosa. 5427

Fistularidae. 5427

Fixation,

algae by OsO₄ in CC1₄. 565

plastic embedding. 5599

preparation of slides, algae. 4603

Fixation-biological, effect of light on, in Ostrea and Crepidula. 745

Flagella,

Chlamydomonas reinhardtii. 36

movement, spermatozoa, invertebrates. 7610

ultrastructure, Strigomonas oncopelti. 110

Flagellamonas gen. n., (Astasiaceae), North East China. 7546

Flagellata,

cultivation of marine species. 5853

NE Asia, South America. 2573

Stromia, gen. n., Brazil. 2574

taxonomy 1925-1957. 2474

taxonomy 1959-1961. 2475

taxonomy, 1967. 2476

Flagelloseranus danae gen. et sp. n., (Serranidae). 8989

Flagelloseranus meteori sp. n. 8989

Flavonoids, Chlorophyta. 566

Flaviocingula nipponica. 6625

Flavobacterium. 3462, 5772, 6689

use of phytol as carbon source. 4754

Flavourings, shrimps. 4025

Flocculation, algal, with synthetic organic polyelectrolytes. 2500

Flooding,

destruction of soil by microflora. 5796

influence on springbrook community. 5524

Flooding tolerance, Puccinellia. 6828

Flora,

effect of altitude. 2561

effect of redox potential and pH on peat-bog plants. 2562

Florida Bay. 7797

Mediterranean. 7606, 7607

microflora content oil-containing sewage. 3778

physiology of macrophytes in hard-water lakes. 2560

phytosociology, Camarque. 7593

vascular hydrophytes, Lake Kariba, Rhodesia. 2559

Florida,

ecology of Crassostrea in Old Tampa Bay. 250

Pecten gibbus off Cape Kennedy. 262

Florideophycidea, life histories. 5742

Flowering,

Lemna gibba in presence of respiratory inhibitors. 6824

Lemnaceae. 7598

Flume, for behaviour studies, marine fish. 1726

Flumenicola virens, parasitism by Plagioporus virens, effect on digestive glands. 8666

Fluorescence,

absence of quenching in photosynthetic mutant of Euglena. 583

complexity of in Chlorella. 555

eyes of Crangon, Palaemon and Penaeus. 183

oxygen evolution, Chlorella pyrenoidosa. 4661

Fluorine, ions applied jointly with copper ions to Chlorella. 1061

Fluviphylax pygmaeus, Amazon. 6555

Fodiator acutus, retina. 4449

Foleyella confusa sp. n., parasite of Rana limnocharis, Manila. 8517

Foleyella duboisi. 8517

Foliophycus. 5629

Fontinalis. 5813

Fontinalis antipyretica, zinc uptake. 1132

Food and feeding, (see also Food chains). 6338

Alestes macrophthalmus. 863

Ambassis gymnocephalus, mullet eggs. 4398

and control of volume within test of sea urchins. 273

and growth, fish. 2335

and growth rate, Tilapia. 2295

and satiation amount, fish. 2334

and seasonal activity in Salmo trutta. 852

Anguilla anguilla, in ponds. 2311

Argobuccinum argus in relation to proboscis. 2743

assimilation, Pacifastacus leniusculus. 2659

Asterias amurensis on bivalves. 2824

Calanus helgolandicus on Ditylum brightwellii. 1884

calorific values selected Leptodora kindtii. 1882

Cephalochordata, Madras. 4203

Chlorella as contributor to food supply of man. 38

Chologaster agassizi. 3041

Chrosomus erythrogaster. 2996

Conus spp. 2745

Coryphella verrucosa. 2746

Cottus gobio and Parenophrys bubalis. 3027

Crangon vulgaris. 4039

Crassostrea virginica larvae on Monochrysis lutheri. 2007

Crustacea, Sea of Azov. 1940

Daphnia. 1879

digestion and consumption in Katsuwonus pelamis. 451

digestive response of Salmo to pellet diets. 847

Food and feeding, contd.

- Dinophilus gyrotilatus*. 136
Dreissena polymorpha, rhythms. 2008
 effect of activity, G6PD, Salmonidae. 4338
 effect of limited supply on growth rates of coho salmon and steelhead trout. 378
 effect of *Strongylocentrotus* grazing on benthic algal populations. 2033
 effect on growth before and after yolk absorption in *Oncorhynchus*. 844
 feeding behaviour. 5945
 feeding behaviour, *Alepisaurus ferox*, Japan. 9023
 feeding behaviour, *Alepisaurus ferox*, Pacific. 5430
 feeding behaviour, *Alestes baremoze*. 8127
 feeding behaviour, *Alestes baremoze*, Lake Albert. 5317
 feeding behaviour, *Alestes dageti*. 7334
 feeding behaviour, *Anguilla rostrata*, New Jersey. 7386
 feeding behaviour, *Arenicola grubii*, Black Sea. 8525
 feeding behaviour, *Aythya affinis*, subarctic Taiger. 7207
 feeding behaviour, *Balaenoptera borealis*, Antarctica. 8841
 feeding behaviour, bill anatomy, *Haematopus ostralegus*. 8822
 feeding behaviour, Bryozoa. 6186
 feeding behaviour, *Bufo asper*. 7151
 feeding behaviour, *Calanus helgolandicus*. 5963
 feeding behaviour, *Carangoides malabricus*, Bay of Bengal. 8165
 feeding behaviour, *Carcinus maenas*. 6007
 feeding behaviour, Castor, Ohio. 7213
 feeding behaviour, Chironomidae, benthos. 7006
 feeding behaviour, *Clinocottus analis*. 7353
 feeding behaviour, *Colisa lalia*. 8167
 feeding behaviour, colonial *Pennaria*. 7674
 feeding behaviour, complementary niches sustained by selective predation. 6604
 feeding behaviour, copepods, Pacific. 4892
 feeding behaviour, *Ctenopharyngodon idella*. 7314
 feeding behaviour, daily changes, *Salmo trutta*. 5307
 feeding behaviour, dark spot receptors in retina, *Rana temporaria*. 8798
 feeding behaviour, deposit-feeding, effects on sediment stability. 6635
 feeding behaviour, deposit-feeding, *Hyalella azteca*. 6026
 feeding behaviour, development and culture of pelagic copepods. 5959
 feeding behaviour, dispersal mechanism, vertical migration, *Pandalus jordani*. 6980
 feeding behaviour, *Dorosoma cepedianum*, Kansas. 6388
 feeding behaviour, Echeineidae. 7418
 feeding behaviour, *Esox niger*, Mississippi. 5268
 feeding behaviour, estimation of allowances, *Salmo* sp. 6426
 feeding behaviour, *Eupleura*, *Urosalpinx*. 8654
 feeding behaviour, feeding rate *Asterias forbesi*. 8710
 feeding behaviour, fish, Lake Barberspan. 3636
 feeding behaviour, *Gasterosteus aculeatus*, Alaska. 6411
 feeding behaviour, *Glossogobius*, Laguna de Bay. 3681
 feeding behaviour, *Gobius cobitis*, Brittany Coast. 7358
 feeding behaviour, *Heterandria formosa*. 6464
 feeding behaviour, *Hyalella azteca*. 6974
 feeding behaviour, *Hydrocynus forskali*, Lake Albert. 5317
 feeding behaviour, *Hymenocera picta* on starfish. 6027
 feeding behaviour, *Ictiobus*, Arizona. 6468
 feeding behaviour, *Labidesthes sicculus*, Indiana. 6564
 feeding behaviour, *Lampanyctus mexicanus*. 3692
 feeding behaviour, *Lucioperca*. 7364
 feeding behaviour, maintenance requirement, *Trachurus*, Fugu, *Salmo*. 3601
 feeding behaviour, *Manicina*, *Montastrea*, *Porites*, Florida. 5874
 feeding behaviour, *Merluccius merluccius*, Argentina. 8150
 feeding behaviour, *Micralestes acutidens*. 7334
 feeding behaviour, natural toxins. 6647
 feeding behaviour, *Octopus cyanea*. 8694
 feeding behaviour, *Oncorhynchus nerka*. 8101
 feeding behaviour, *Oncorhynchus nerka*, guide to migration, Bristol Bay. 8916
 feeding behaviour, *Oncorhynchus*, open ocean. 6403
 feeding behaviour, Ophiuroidea, New Zealand. 7119
 feeding behaviour, Oregon moist pellet, *Micropterus salmoides*. 6503
 feeding behaviour, *Panulirus argus*. 4957
 feeding behaviour, *Peltoperia maria* nymphs. 6085
 feeding behaviour, *Perca fluviatilis*, Windermere. 4423
 feeding behaviour, *Phalacrocorax pencillatus*, California. 8825
 feeding behaviour, *Philippia*. 3448
 feeding behaviour, Pisces, midwater, Pacific. 7232
 feeding behaviour, pond carp. 8954
 feeding behaviour, *Rana pipiens*. 8776
 feeding behaviour, *Renocera*. 7017
 feeding behaviour, *Rhinichthys atratulus*, Kentucky. 6479
 feeding behaviour, role of tentacle apparatus, *Corallium rubrum*. 5867
 feeding behaviour, *Sabellaria kaiparaensis*. 8537
 feeding behaviour, *Salmo gairdnerii*, sequential changes. 3625
 feeding behaviour, *Salmo*, *Salvelinus*, California. 7295
 feeding behaviour, *Salvelinus*, Lake Tahoe. 3623
 feeding behaviour, *Sarracenia purpurea*, Quebec. 3310
 feeding behaviour, *Sebastes mentella*, North Atlantic. 9002
 feeding behaviour, selection, *Oncorhynchus nerka*, Alaska. 6411
 feeding behaviour, *Seriola quinqueradiata*. 5414
 feeding behaviour, size relationships between *Acroneuria* nymphs and prey. 706
 feeding behaviour, spawn eating, *Rana* spp. 6265
 feeding behaviour, summer, *Morone saxatilis*, Virginia. 6506
 feeding behaviour, *Tealia felina*. 7677
 feeding behaviour, Thunnidae, Atlantic Ocean. 6539
 feeding behaviour, *Thunnus* spp, Baja California. 9011
 feeding behaviour, *Tilapia rendalli*. 6528, 6529
 feeding behaviour, *Torpedo marmorata*. 5220
 feeding behaviour, *Tursiops gilli*, Kyushu. 7227
 feeding behaviour, veligers, *Nassarius reticulatus*,

Food and feeding, contd.

- Crepidula fornicata*. 6119
 feeding behaviour, visual inhibition, *Bufo bufo*. 6212
 feeding behaviour, water-spitting, *Toxotes jaculatrix*,
Colisa lalia. 8187
 feeding behaviour, zooplankton, Antarctic sei whale.
 8593
 feeding efficiency of *Calanus* in terms of N and P. 960
 feeding mechanisms, blackfly larvae. 8630
 feeding mechanisms, change in size of jaw apparatus
 in relation to age, Pisces. 8853
 feeding mechanisms, Embiotocidae. 5386, 6487
 feeding mechanisms, endostyle, *Lampetra planeri*.
 8065
 feeding mechanisms, lantern support structures,
Clypeasteroidea. 6175
 feeding mechanisms, Ophiuroidea, New Zealand.
 7119
 feeding mechanisms, radula, electromechanical
 coupling of muscles, *Busycon canaliculatum*. 7853
 feeding mechanisms, *Sabellaria kaiparaensis*. 8537
 feeding mechanisms, tentacle apparatus of *Corallium*
rubrum. 5867
 feeding rate, Cetacea. 2901
 feeding rate, fish in ponds. 2382
 feeding rate, *Goniobasis clavaeformis*. 2752
 feeding rate, growth relationship, *Pleuronectes*
platessa. 4470
 feeding rate, seasonal changes in *Balanus*. 2638
 food, composition, containing spiruline algae. 521
 food consumption, as demonstrated by radiocaesium
 elimination in *Lethocerus*. 705
 food conversion. 6582
 food conversion, algae, *Lepomis macrochirus*. 4414
 food conversion, amino acids, Cyprinus larvae. 7324
 food conversion, Crustacea. 4936
 food conversion, Ctenopharyngeodon idella, aquatic
 weed consumption. 4365
 food conversion, dietary proteins, Cyprinus. 7323
 food conversion, effects of oxygen, *Esox lucius*. 6397
 food conversion, *Gadus morhua*, Baltic Sea. 5360
 food conversion, *Hyalella azteca*. 6974
 food conversion, juvenile flat-fish. 941
 food conversion, *Macrobrachium rosenbergii*. 3406
 food conversion, mathematical description, *Seriola*,
Chrysophrys, *Pneumatophorus*. 6526
 food conversion, *Pennaria* colony. 7674
 food conversion, Pisces. 6322
 food conversion, *Pleuronectes platessa*. 3044
 food preferences, invertebrates, relation to calor-
 ific values of algae. 1014
 food preferences, *Merluccius merluccius*, Argentina.
 8150
 food preferences, *Mirounga angustirostris*. 4260
 food preferences, *Rastrelliger kanagurter*. 8181
 food selection, *Diaptomus oregonensis*, British
 Columbia. 4000
Fungiavaca eilatensis. 2792
 growth of chum salmon under different feeding
 regimes. 377
Hippolyte inermis larva. 1249
Idus idus. 412
 juvenile flat-fish. 465
 larval and post-larval *Limnadia stanleyana*. 151
 long term effects of diet, *Salvelinus namaycush*,
 Ontario. 4345
Macoma spp. 256
 medusae and Chaetognatha. 629
Octopus on gastropods. 2814
Ophryoxus gracilis. 3988
Peltodoris atromaculata, on *Petrosia dura*. 4129
Perca fluviatilis in 1st year. 441
 phagotrophic, *Ceratium lunula*. 1792
Phalacrocorax carbo novaehollandiae, Otago. 4255
Physeter catodon. 2911
Pisaster. 4133
Poecilia reticulata. 2329
 predatory food habits and abundance of *Pandalus*
jordani. 2667
 Pteropoda. 4117
 relationships between littoral fish, France. 4401
Salmo trutta, *Salmo gairdneri*, at night. 4344
Scopimera inflata. 2699
 similarities, *Ascapus truei* and *Rhyacotriton*
olympus. 4217
 size preference of food, *Micropterus salmoides*. 4417
 small fish on jellyfish. 1847
 stomach contents of *Gadus morhua* and *Melano-*
grammus aeglefinus. 424
 stomach contents of juvenile *Oncorhynchus* spp. 842
 stomach contents of *Sebastes flavidus*. 908
Thunnus atlanticus, Brazil. 920
Thyrssites atun. 2289
 tubificid worms in polluted harbour. 2620
 uptake and digestion in *Allogramia laticollaris*. 88
 uptake in *Echiurus echiurus*. 2609
 utilization, *Tilapia melanopleura*. 2294
 zooplankton. 3071
 zooplankton grazing rates. 4482
Food chains. 5522, 5931, 6082, 7227, 8028, 8101.
Aythya affinis, subarctic Taiger. 7207
 bacteria, Washington and Oregon coasts. 5772
 bacterioplankton, Black Sea. 6595
Balaenoptera borealis, Antarctica. 8841
 benthos, Baltic Sea. 5541
 breakdown of leaves by feeding of *Peltoperia maria*
 nymphs. 6085
Bufo asper. 7151
Carcinus maenas. 6007
 Castor, Arctic. 8028
Chaetoceros simplex. 5666
Clinostomum, *Micropterus*, *Pimephales*. 7339
 concentration of toxic algae. 8330
 Copepoda, Echeineidae. 7418
 Daphnia. 7720
Euphausia distinguenda, *Carangoides malabicus*,
 Bay of Bengal. 8165
 Gulf of California. 8041
Ilisha indica, *Prionospio pinnata*, India. 4320
 Lake Barberspan. 3636
 larvae, *Oncorhynchus*, *Gasterosteus*, Alaska. 6411
Lepidurus arcticus. 4885
Lucioperca, *Acerina*, *Alburnus*. 7364
Lucioperca, Lake Balaton. 7365
Macrurus rupestris, larvae, *Pontophilus norvegicus*.
 6980
 mesopelagic fish, eastern Indian Ocean. 4306
 Mitra, *Amphichthys*. 5007
Octopus, *Scorpaena*, California. 3489
Opsariichthys uncirostris, predator on *Plecoglossus*
altivelis, Lake Biwa. 7340
 oyster predation by *Stylochus ellipticus*. 5920
 Pacific Ocean. 7232
 Porpita. 4846
Renocera, *Bivalvia*. 7017
Rhinichthys atratulus, Kentucky. 6479

Food chains, contd.

- Roccus chrysops*, Lake Winnebago. 5408
Salmo. 3625
Salmo, *Salvelinus*, California. 7295
Salvelinus namaycush, Lake Tahoe. 3623
 Strait of Georgia. 4752
Thunnus albacares, Angola. 7378
 transfer of radioisotopes between detritus and benthic macroinvertebrates. 9064
 tropical oceans. 5512
 zooplankton. 4492

Food for human consumption,

- fish protein concentrate. 7246
 fish protein concentrate, Morocco. 6336

Foraminifera. 5547, 8240

- Brazil. 8445, 8446
 Chesapeake Bay estuaries. 1830
 continental shelf, Canada. 8444
 distribution, Antarctic Ocean. 4801
 distribution, Barbados. 6834
 distribution in fossil records. 3897
 distribution, Pacific. 6835
 ecology of, Pacific floor. 5511
 evidence for modern warming of North Atlantic Ocean. 3880
 in epiphytic salt marsh communities. 1141
 Isles of Scilly. 7625
 Lake Baikal. 6931
 living forms in Abu Dhabi region. 3884
 Miyako and Yamada Bays, Japan. 1829
 morphology and ecology. 5838
 radiation in the Cenozoic. 99
 Rocas Atoll. 1831
 seasonal variations at Seahorse Key. 3883
 Sepetiba Bay, Rio de Janeiro. 1832
 Tertiary, Puerto Rico. 7624
 ultrastructure. 8447
 Villefranche, harbour exit. 620

Foraminiferidae, key. 4800**Forcipomyia (Thyridomyia)**, larvae. 6078**Forests**, effects of cutting and herbicide treatment on nutrient budget, Hubbard brook. 6614**Forficatocaris noodti gen. et sp. n.**, Brazilian limnopsammal. 1217**Formaldehyde**, chromatographic analysis, in tissues. 6705**Fossils,**

- algae, *Hannaites quadria* gen. et sp. n., Eocene South Atlantic. 3814
Algites enteromorphoides, Missouri. 5691
 Ammonoidea, Antarctica. 6155
 Ammonoidea, Permian, Canada. 6154
 animals, Baden. 5229
 animals, Mexico. 4996
Archaeocyathi. 7656
Arctomyalina vokesi sp. n., Pennsylvanian, Arctic. 7075
 Articulata, Ordovician, Wyoming. 7130
Azolla, Galapagos Islands. 1131
 Brachiopoda, Guatemala. 6192
 Brachiopoda, Miocene, Venezuela. 7929
 Brachiopoda, Nevada. 6191
 Brachiopoda, Silurian, Yukon. 7131
 Brachiopoda, Tennessee. 6190
 brain. 5165
Bufo, Pleistocene, Florida. 6216
Cancrinella limestone, Spitsbergen. 2838
Ceratitis, Germany. 5032, 7092, 7093

- Chitinozoa, Devonian, Missouri. 5828
Constantina pulchra, Devonian, Pennsylvania. 7133
 crinoids, Pennsylvanian, Virginia. 8702
Cryptothyrella, Ohio, Kentucky. 6194
 Cyanophyceae, Precambrian. 7489
Cyrtentactinia. 6854
 Diatomaceae, New Zealand. 5673
 dinichthyid, Devonian, Iowa. 6553
 Echinoidea, Spain. 7107
Ecolsonia cutlerensis, Mexico. 5087
Enchodus lewesiensis, Turonian, Texas. 9028, 9029
Enchodus longipectoralis, Cretaceous, Brazil. 7391
 Eocene, rust and alga from Western Kentucky. 1117
 evolution of Porifera, Palaeozoic. 7654
 faunal history, North Atlantic. 5612
 Fimbriidae, Mesozoic. 7082
 fish, Devonian. 2940
 Foraminifera. 3897
 Foraminifera, North Dakota. 5839
 Foraminifera, Tertiary, Puerto Rico. 7624
 formation of shell feeding-fragments capable of fossilization in *Homonarus*. 189
 Fusulinacea, Arizona. 5829
Gephyrocapsa protohuxleyi sp. n. 3808
Helophorus orientalis, British Isles. 6079
 Hydrozoa of the Sandling, Austrian Alps. 630
Hypsidoris farsonensis, Wyoming Eocene. 7330
 Jurassic, Madreporaria. 6889
Kapurdia bhargavai gen. et sp. n. (Centropomidae), Tertiary, Rajasthan. 7359
Lima excavata, subfossil, coral reef, Mediterranean. 7083
 living fossils. 4357
 living representatives of Fimbriidae, Fimbria. 7082
Macrociemys auffenbergi, Pliocene, Florida. 5145
Mattaspongia apaches, *Pelicaspongia sterea*, gen. et spp. n., Devonian, Alberta. 5856
Milosaurus mccordi, Pennsylvanian, Illinois. 6296
 Miocene, Odoberidae. 2906
 Mollusca, California. 4995
 Mollusca, Dijon. 7019
 Mollusca, Illinoian, Kansas. 7060
 Mollusca, Oahu. 7020
 nonpetrified, Carolina. 8267
 North Pacific. 3784
 number of invertebrate species. 7613
Ommatocarcinus arenicola. 8563
 Ostracoda, South Africa. 6065
Paleosiren beinerti, Czechoslovakia. 6233
 Paleozoic history of amphidisc and hemidisc sponges, Carboniferous of Uruguay. 5855
 Pelobatidae, Oligocene, North America. 7159
 Permian, *Helicoprion*, Spitsbergen. 2944
 Permian marine fauna, Australia. 3183
 plankton, chronostratigraphy. 1667
 plants, Carolina. 8267
 plants, Ypres. 8391
 Porifera. 6871, 7656, 7657
Proterogyrinus scheelei, Carboniferous, (Anthracosauria) Virginia. 7960
 Protozoa, Pleistocene, Foraminifera in subantarctic cores. 3879
Pyrodinium bahamense. 3290
Rhaetomegalodon. 6151
Rugoverticula mokurensis gen. et sp. n. (Isognomonidae), Cretaceous, Afghanistan. 7893
 Serpulidae, Mesozoic. 4882
 Silurian, Afghanistan. 7665

Fossils, contd.

- Sphinctozoa. 7656
 - Spratticeps gaultinus gen. et sp. n. (Clupeiformes) Cretaceous, British Isles. 8897
 - Stepanoviella, Australia and India. 6193
 - Stictoporellina, Ordovician, Minnesota. 6195
 - subfossils, Cladocera, Lake Balaton. 6937
 - Synorichthys, Triassic, USA. 6588
 - Tentaculitidae, Devonian, Alaska. 6163
 - terrestrial mammals, methods. 6164
 - Trematops stonei sp. n., Permian, Ohio. 8000
 - Trilobita, Cambrian, Texas. 7132
 - Trilobita, Massif Arize. 7833
 - typification in paleoprotistology. 619
- Fouling and fouling organisms.** 3874
- antifouling liquids. 4562
 - antifouling paint. 6712
 - Balanus balanoides, hatching substance. 3365
 - barnacles, control. 7736
 - benthos, Baltic canal. 6624
 - Britain, north coast. 2636
 - control, Ago Bay. 3478
 - control, chemical. 5824
 - control, chlorine in cooling waters, power stations. 5030
 - control of organisms incrusting and penetrating timber. 1226
 - control of underwater metal structures, cathodic protection. 9139
 - control using antifouling paint. 9140
 - cooling water of power stations. 5030
 - Cuxhaven. 6152
 - ecology, Civitavecchia. 4577
 - effects of sewage pollution, Florida. 6674
 - electrolytic treatment. 1743
 - Enteromorpha. 4671
 - Enteromorpha, ultrastructure and biochemistry of zoospores. 4670
 - Genoa harbour. 6684
 - growth and longevity, California. 3314
 - in pollution. 2439
 - lab culture of cirriped larvae. 5983
 - Monterey Harbour, California. 2833
 - Mytilus, power stations. 9101
 - patented composition for protection of marine surfaces. 515
 - Perna canaliculus, Kouma harbour. 4158
 - Pontogammarus robustoides, Curakhova state. 4076
 - prevention. 2470-2472
 - prevention using paint. 9133
 - Watersipora arcuata, South California. 4198

Fragilaria capucina. 4586

Fragilariopsis cylindrus. 3803

France,

- Arcachon, Balanus balanoides. 2637
- Arcachon, ecology of beaches. 1689
- Ardenne marsh, algae. 3192
- Atlantic coast, acclimatization of Jasus lalandei. 693
- Atlantic coast, "gill disease" in Crassostrea. 734-740
- Bassin D'Arcachon, Phycomycetes (Chytridiales). 1130
- Bouches-du-Rhone, catalogue of Hemiptera. 704
- Brittany, Anthozoa. 3913
- Brittany, Hydroidea. 3912
- Brittany, Porifera. 3903, 3904
- Chondrymenia lobata, new record. 60
- coast, Ulothrix subflaccida specificity and life cycle. 3247

- Cymothoidae, Gulf of Marseille. 181
- Dugesia tigrina, Bouches-du-Rhone. 126
- Foraminifera at harbour exit, Villefranche. 620
- Gulf of Gascony, fishery of Nephrops norvegicus. 697
- Gulf of Gascony Nino armoricana sp. n. 3971
- Gulf of Gascony, spawning of Teleostei. 817
- Gulf of Gascony, thermal state affecting sardine fishery. 823
- Gulf of Lions, Diplectanidae. 3940
- Gulf of Lions, Nematoda. 3952
- Gulf of Marseilles, Pherosiphonia spinifera var. robusta. 3281
- harpacticoids, Gulf of Marseille. 162
- Hopperia (Nematoda) gen. n. 3951
- Marseilles, Coccolithophoridae. 3812
- Marseilles, littoral Cyanophyceae. 3793
- microplankton of rivers Morlaix and La Penze. 953
- N. Gascony continental shelf and "Grande Vasière", bionomic study. 979
- Orne Estuary, Exanthemachrysis gayralii gen. et sp. n. 3219
- Provence, Polychaeta. 3955
- rearing of Tilapia. 3674
- Salse-La Nouvelle, ecology of resurgence springs. 969
- Touraine, Anjou, Charophyceae. 3818

Freeze-etching, oocytes, Teleostei. 7347

Freezing. 6350

- cod, glycolytic and nucleotide changes. 3009
- cod, reaction of free fatty acids and protein. 3010
- effect of $MgSO_4$ and cryoprotective agents on free and fatty acid formation. 854
- fatty acids and alteration of Mallotus villosus. 833
- naturals of Littorina saxatilis, Spitsbergen. 2759
- Ostrea lutaria frozen storage life. 2800

Freshness of fish, estimation by enzyme assay. 3576

Freshwater environment,

- algal bloom, Lake Constance. 4586
- bacterial and floral ecology. 5523
- bottom deposits. 7817
- classification of biotypes. 5525
- conductivity of waters, Mato Grosso. 5528
- ecology, Lake Van. 5531
- Entocytheridae, Kentucky. 6063
- facies of tropical water course, Congo. 3728
- fauna, Surinam. 5529
- fish distribution, Alaska. 6372
- fish yield. 3734
- fish zones, Czechoslovakia. 3553
- for faunistic study, Andriandrano. 3729
- fungi, Yugoslavia. 7580
- gnotobiotic models. 3726
- influence on flooding on springbrook community. 5524
- key to invertebrates, UK. 5526
- limnology, Middle Parana River Valley. 3733
- plankton, Germany. 7425
- pollution by uranium fusion products. 9083
- Porifera, Japan. 4826
- Spongillidae, Cameroon. 4828
- temperature effects on oxygen requirements. 5568

Frog,

- accommodation in neurons. 2077
- acid secretion in stomach. 7969
- action of anaesthetics on isolated spinal cord. 7188
- analysis of statistical characteristics, neurons, optic layers. 6248
- asymmetry of osmotic flow, intestine. 7961
- bacterial epidemic. 1814
- brain. 7968, 8796

Frog, contd.

- brain cells. 7964
cellular potentials in isolated anaesthetised spinal cord. 7189
chromatophore responses. 2089
conduction mechanism in bipolar cells. 8799
cone regeneration rates. 2879
degradation of lactate dehydrogenase by eggs. 5112
development of intracellular membranes. 4221
drug effects on heart. 7995
effect of aldosterone on active sodium transport and moulting, skin. 7180
effect of 2,4-DNP, muscles. 8792
effect of hypothermia, cellular and vascular response to xenografts. 8797
effect of MSH on melanophores. 2074
effect of neurotropic agents on myocardium sensibility. 8800
effect of nickel, uranyl and calcium ions on liberation of transmitter in neuromuscular junction of frog. 309
effect of PAM on rectus abdominis muscle. 7193
effect of prolactin on protein synthesis, tail fin. 8803
effect of rate and number of cell divisions on RNA synthesis. 7989
effect of saxitoxin and tetradoxin on neuromuscular junction. 320
effect of steroids on brain. 7191
effect of toxins on neuromuscular junctions. 7974
effect of toxins on NMJ. 7190
efferent pathways of optic tectum. 314
erythrocyte, cyclic nucleotide phosphodiesterase. 8790
fluxes across epithelia. 8802
histochemical localization of calcium in skeletal muscle. 7992
hormone-induced capacitance changes in skin. 7176
influence of quinine on ampullar receptors. 8791
inhibitory interaction between motoneurons. 6288
initiation of nerve impulses, muscle spindle. 7972
isolated spinal cord electrode studies. 7975
lateral inhibition of retina in dark. 6250
mechanical activation kinetics, frog muscle. 6235
muscle. 8794
muscle cells. 6239
muscle fibres. 8793
muscle, protein synthesis. 317
myoneural junction, transfer function. 7192, 7973
nerve stimulation of skin. 2081
pace-maker activity of atrial muscle. 6237
permanence of postsynaptic specializations in sympathetic ganglion after denervation. 315
phosphodiesterase isolated from erythrocytes. 7987
phylogeny, blood platelets. 7967
physiology. 7962
population ecology. 306
post-tetanic potentiation at NMJ. 7183
radial spread of muscle contraction. 6236
restricted replication of virus 3. 8801
retina. 6249
retinal sodium diffusion. 7194
sartorius muscle fibres, capacitance. 2078
sartorius muscle fibres, ionic conductances. 2079
sartorius muscle fibres, without transverse tubules. 2080
series elastic components of muscle. 8795
skin, action of β adrenergic site stimulating catecholamines, *Rana pipiens*. 5113
sodium-calcium, competition at myoneural junction. 2076
sodium flux in stomach muscles. 2084
staphylococcal α -toxin induced transport and permeability changes in skin. 771
stationary ionic permeabilities of sensory and motor fibres. 310
steps between depolarization and increase in respiration, skeletal muscle. 6240
ultrastructure, rod outer segment. 6247
velocity function of the movement detecting class-2 neurons in retina. 322
Frontonia maris-albi. 7627
Frontonia tchibisovae. 7627
Frustules, of *Cylindropyxis*, ultrastructure. 2496
Fucaceae,
egg polarity. 3255
stabilization of polarity axis in zygotes. 1071
mutual polarization of nearby pairs of eggs. 1074
Fucus. 6714, 6781
de novo formation of egg cell wall in rhizoid protuberance. 2533
initiation and suppression of apical hairs in embryos. 1073
Fucus distichus, fertilization. 8374
Fucus vesiculosus. 3257, 4602, 8277
apolar embryos. 4701
effect of substratum on detachment. 2530
histology:regeneration and adventive embryony. 1066
zonation, vesicle pressure and gas compositions. 1067
Fucus virsoides,
free space photosynthesis. 1068
photosynthesis and ion loss. 3838
Fuels,
crude oil, watersoluble compounds. 3779
oil-salvaging apparatus. 8257
Fulvic acids and derivatives as media for aquatic Actinomycetes. 3859
Fumarate, reduction in *Crassostrea virginica*. 2809
Fumaronitrile, for control of microorganisms. 1119
Fundulus. 6544
chromosome constitution, hybrids. 6559
effects of temperature of acetylcholinesterase. 3006
hybrids, chromosome morphology. 8206
parasitism by *Ascocotyle sexidigita* sp.n. 8491
pigment dispersion. 3689
preparation of chromosomes from ovaries. 5447
variation and relationship. 5448
Fundulus catenatus. 5448
Fundulus confluentus. 8238
Fundulus grandis. 4477
parasite, *Swingleus polyclithroides* gen.et sp.n. 4860
Fundulus heteroclitus,
ability to concentrate urine. 458
anterior embryonic shield deletion-transplantation in embryo. 5446
carbohydrate metabolism and survival at subzero temperatures. 6557
developmental genetics of esterase isozymes. 8204
effects of sulphisoxazole. 927
effects of temperature on serum proteins. 8205
electrical coupling between embryonic cells. 6556
genes of lactate dehydrogenase. 2319
inorganic constituents, serum. 5444
metal pollution effects on liver enzymes. 8203
neurotoxins. 5443

Fundulus heteroclitus, contd.

- osmoregulation. 2318
- serum organic constituents, supercooled fish. 5445
- thyroid function in fish adapted to temperature and salinity. 7393

Fundulus notatus. 7394

Fundulus similis. 4477

- tidal rhythm in susceptibility to sodium chloride and endrin. 6558

Fundulus stellifer. 5448

Fungi. 8267

- aquatic, Iceland. 604, 1118
- aquatic, phylogenetic significance of polyunsaturated fatty acids. 78
- British Columbia. 6815, 6816
- cave flora, British Isles. 6800
- Colorado. 7579
- dispersal by Insecta. 4104
- distribution, ecology, Wisconsin. 7581
- Douglas Lake. 5801
- from wood substrates off Helgoland. 1122
- fungicides. 6733
- Hyphomycetes, Florida. 7582
- immunology. 4635
- infection by, of calcareous parts of marine animals. 596
- marine, role in calcareous boring. 2553
- North Sea and North Atlantic. 1121
- parasitism of desmids, Windermere. 8327
- pathogenic spp from sand and soil, Hawaii. 605
- physiological ecology. 4766
- waste-stabilization pond system. 3144
- yeasts in marine environment. 5799
- yeasts, Saskatchewan river. 5797

Fungia scutaria, commensal with new mytilid. 253

Fungiacava eilatensis gen. et sp. n., (Bivalvia). 253

- feeding. 2792
- commensal with *Fungia scutaria*. 253

Fungicide. 5192, 7483, 9132, 9133, 9138.

- patent. 1120
- quinazoline derivatives. 3864
- secretion of *Salamandra maculosa*. 6267

Furcellaria fastigiata. 4602, 8277

Furgaleus. 4270

Fusulinacea, Pennsylvanian, Arizona. 5829

Gadus luscus. 8315

Gadus merlangius,

- fishing industry, Scottish west coast. 5370
- population estimates, North Sea. 5371
- spawning. 8974

Gadus morhua. 5187, 6714, 7346.

- aging, Gulf of Maine. 6484
- auditory masking and critical band. 423
- development and morphology of Kupffer's vesicle. 6581, 7413
- effects of oestradiol 3-benzoate on plasma. 883
- experimental fishing, Greenland. 6483
- fecundity, Iceland. 5374
- feeding conditions, Baltic Sea. 5360
- fishery and biology, Newfoundland. 4388
- fishery, Newfoundland. 421
- fishing industry, Baltic. 5356
- fishing industry, Baltic Sea. 5357-5359
- fishing industry, Lofoten and Barents Sea. 5352
- fishing industry, North Atlantic. 6482
- fishing industry, North Sea. 5355
- irradiation for storage. 5372
- lesions, ovaries. 4389
- otoliths, chemical composition. 3015
- population estimates. 5349
- population estimates, Barents Sea. 5353
- population estimates, Greenland. 5347, 6481
- population estimates, Iceland. 5348, 5350
- population estimates, west Scotland coast. 5354
- statistical return, Bornholm and Arkon basins. 5376
- stimulation of tectum. 5378
- stomach contents. 424

Gadus morhua callarias, eye muscles. 422

Gaetanus minispinus sp. n., Pacific. 4888

Gaffkemia,

- characteristics of *Gaffkya homari*. 191
- in *Homarus americanus*. 691

Gaffkya homari,

- characteristics. 191
- effects on host, *Homarus americanus*. 691

Gagata sexualis sp. n., India. 3000

α -Galactosyl glycerides, osmoregulation, in *Ochromonas* and *Rhodophyta*. 1026

Galapagos Islands,

- fossil *Azolla*. 1131
- Hindsiclava hertleini* sp. n., and *Mitrolumna keenae* sp. n. 2756

Galathea. 7749, 8557

Galathea algae. 8557

Galathea inflata. 8558

Galathea pubescens. 8559

Galathea squamifera. 6704

Galathea tanegashimae. 8557

Galatheididae,

- distribution, Japan. 8558
- East China Sea. 8559

Galaxias. 8193

Galaxiidae,

- distribution, New Zealand. 8193
- taxonomy. 3617

Galeichthys, osmoregulation, erythrocytes. 3643

Galeocerdo, distribution, Georgia. 4295

Galeus melastomus, biosynthesis of corticosteroids in interrenal gland. 5217

Galeus piperatus, life history, California. 2943

Galliteuthis armata, buoyancy mechanisms. 6156

Galvercerdo cuveri. 8879

Gambusia. 5182

- new species, South Florida, Cuba. 3690

G

Gabon, coast, Penaeidae. 2662

Gadidae. 4387

Gadiformes. 5205

Gadus. 5179

- avoidance of ship after hearing noise. 8972
- effects of dimethylamine on trimethylamine value. 8971
- isolation of muscle tropomyosin. 5385
- migration, Skagerak. 3013
- North Sea. 8973
- sensitivity of proteolytic enzymes to irradiation. 8146
- stocks, northeast Atlantic. 8865

Gadus callarias. 4387, 8961

- Gambusia affinis**. 6654, 7394, 8238
cell response to chloride- and sulphate-enriched media, gills. 6560
chloride-secretory cells, staining. 4450
insecticide resistance. 1697
sun-compass. 9032
- Gametes**. 3822
Cyclotella. 5661
male, in Cyclotella. 1763
resorption, Pisces. 8889
- Gametogenesis**,
Donax cuneatus, Madras Coast. 4149
in Mordacia. 805
- Gammaridae**, irradiation. 186
- Gammaridea**, sublittoral ecology, Hawaii. 5988
- Gammarinema**. 7690
- Gammarus distribution**,
open ocean. 7765
systematics, Baltic. 1259
- Gammarus duebeni**. 9070
active transport and sodium fluxes at moult. 1246
sex determination. 3411
- Gammarus (Rivulogammarus) elki sp. n.**, from Missouri and Arkansas. 1245
- Gammarus finmarchicus**, osmoregulation in distilled water. 6169
- Gammarus lacustris**,
biology, Norway. 2645
life cycles of its parasites. 8579
Norway. 4929
- Gammarus locusta**, effect of HgNO_3 . 2644
- Gammarus minus**. 7742
- Gammarus pecos**, Texas. 4928
- Gammarus pulex**,
factors affecting drift and upstream movements. 7766
redescription based on neotype material. 3395
- Gammarus roeseli**, exopeptidase. 6971
- Gammarus tigrinus**, effect of tetrapropylenebenzenesulphonate. 5579
- Gammarus zaddachi**, migration. 1910
- Ganopristidae**. 8069
- Garcinia morella**,
antibiotic principles. 107
antimicrobial activity of guttiferins. 4761
- Gases**,
changes in oxygen tension, changes in gas tension of tissue, Salmo Cyprinus. 7284
dissolved, Voronezh River. 6619
in Fucus vesiculosus and Ascophyllum nodosum. 1067
water analysis. 6651
- Gas exchange**, Chlorella vulgaris, effects of dipyrindyl diquat. 4664
- Gas gland**, multivesicular bodies from nuclear envelope, Perca fluviatilis. 6509
- Gas-vacuole**, of Trichodesmium erythraeum. 1032
- Gas-vacuole membranes**,
Microcystis isolation and analysis. 2493
Microcystis ultrastructure. 2494
- Gas-vesicles**, isolation and purification from Cyanophyceae. 1022
- Gasterosteidae**, lateral scutes. 1637
- Gasterosteus**,
chromosomes and enzymic patterns. 2321
resistance to ectoparasites. 6562
- Gasterosteus aculeatus**. 3946, 5913, 8513
determination of food assimilation. 9106
displacement activity. 7395
effect of day length and temperature on gonad development. 929
effect of predation in evolution. 5450
habituation of conspecific aggression. 2320
host to digenetic trematodes. 1181
host to Diphyllbothrium plerocercoids. 2588
influence of temperature and day length on gonad development. 6561
osmoregulation in distilled water. 6169
osmoregulation, prolactin effect. 3691
scute formation, marine form. 7396
scute variation, Nasu area. 7397
species problem, North America. 4452
urophysectomy. 2343
- Gasterosteus wheatlandi**,
host to Thersitina gasterostei. 167
reproductive behaviour. 928
- Gastric hyaluronidase**, Scomber japonicus. 7371
- Gastric intrinsic factor**, Anguilla rostrata. 1640
- Gastric juices**, separation of carboxypeptidases, Astacus fluviatilis. 178
- Gastroclonium**, ultrastructure iridescent bodies. 3270
- Gastrodelphys**. 3973
- Gastropoda**. 5549, 5609, 7017.
Anatolia. 7025
anatomy of Toxoglossa. 233
Architectonicidae from west coast of Africa. 228
breeding and studying fresh-water spp under continuous water change. 232
chemical control. 8645
cowries from Guam. 226
eastern Pacific cowrie spp. 225
extraction and mounting of radulae. 223
histophysiology, renal cells. 8646
larvae, morphology, Banyls-sur-Mer. 4112
Okinawa. 1974
ornithine cycle enzymes. 1989
osmic staining of photoreceptors. 4248
pelagic larvae, New England. 4114
prosobranch, metamorphosis. 1986
radula replacement. 2742
secretion of acid, Pacific. 3452
Taiwan Straits, radulae. 1973
uncoiling of Vermicularia. 240
- Gastroptychus**, larvae, New Zealand. 4044
- Gastrosaccinae psammobionte**, taxonomy, tropical America. 1911
- Gastrosaccus spp. n.**, French coast. 7767
- Gastrosaccus mediterraneus sp. n.** 7767
- Gastrosaccus olivae sp. n.** 7767
- Gastrosaccus roscoffensis sp. n.** 7767
- Gastrotheca**. 6224
distribution, Argentina. 6225
- Gastrotheca christiana sp. n.**, in Argentina. 300
- Gastrotheca garcilis sp. n.**, Argentina. 6225
- Gastrotricha**,
ecology, Island of Sylt. 1188
new species from Andhra Coast. 3953
- Gaussia princeps**, wax esters. 3992
- Gavia stellata**. 7205
- Gear**,
acoustically transparent hydrodynamic. 6711
actograph. 6268
apparatus for cleaning and preservative treatment of ships hulls. 9122
apparatus for cleaning and preserving closed surfaces above and below water level. 9120
continuous recording of buoyancy variations, invertebrates. 8680

Gear, *contd.*

- culture apparatus for ctenophores. 5877
'trichterkeisel', invertebrates. 6704
dredges. 9103
dredges, molluscs. 3460
drop-net, nekton. 4481
electrofishing. 6332
floating barrier. 8258
flowing reaction vessel. 7477
goby-pot for *Glossogobius olivaceus*, Japan. 8169
hand-operated winch for bacteriological water sampling. 3780
high speed opening and closing plankton sampler. 9045
9045
long-line tuna fishery. 6537
measurement of light absorption, underwater. 6701
oil salvaging apparatus. 8257
otoscope, *Micropterus salmoides*. 5400
otter trawl, Columbia River. 6440
pan-balance. 7475
phytoplankton micro-sampler. 6602
plankton nets. 5484
plankton sampler. 8219
population estimation of pigments of phytoplankton. 5498
pumping. 6335
purse seine, Angola. 6536
sampling. 6697, 6698
seining of farm ponds. 8049
selection, Pacific halibut fishery. 4385
seston catching gear. 4511
shark repelling. 8070
shellfish trap, South Africa. 4974
snella, otter-trawl, *Gadus morhua*, Greenland. 6483
spring-loaded spearing gig. 6706
tagging gun for flatfish. 8050
trawls. 6059
weed harvester. 7592
zooplankton samplers. 9051
- Gecarcinus.** 4911, 7690
- Gelidiales**, morphology and development. 1075
- Gelidium.** 6714
- Gelidium amansii.** 3189, 3190
agar extraction. 6786
jelly formation ability of agarose derivatives. 6787
- Gelidium canaliculatum**, taxonomy. 5743
- Gelidium coulteri.** 6728
- Gelling agents**, *Eucheuma*. 4733
- Gemmosaccus sulcatus**, effects of host. 5984
- Generation number**, of *Ischnura elegans*. 712
- Genetics**,
abnormalities, frequency, estuarine fishes of Georgia. 8862
Acetabularia. 7504
albinism inheritance, *Oryzias latipes*. 3696
albinism, *Penaeus aztecus*. 8596
albinism, *Sphyrna lewini*. 8073
albinism, *Tachysurus dussumieri*. 4382
albino crossing, *Biomphalaria glabrata*. 6104
basis of immunology, *Chlamydomonas*. 3231
basis of sex determination. 8426
behavioural, sticklebacks. 4451
Biomphalaria glabrata. 3438
blood groups, *Engraulis mordax*, Black Sea and Sea of Azov. 6392
body colour, *Oryzias latipes*. 5458
Carassius auratus, Lake Erie. 5326
cell size-nucleic acids and synthetic efficiency in a growth mutant of *Ulva mutabilis*. 1063
Chlamydomonas reinhardtii, closely linked flagellar genes. 1772
chromogranular polychromatism in *Jaera albifrons*. 1253
chromosome constitution, *Cobitidae*. 3633
chromosome constitution, *Cyprinidae*. 3642
chromosome constitution, *Ischnochiton*, Japan. 6162
chromosome constitution, *Poecilia*. 4472
chromosome constitution, *Trypetes lampas*. 5985
chromosome mapping, *Rana pipiens*. 7984
chromosomes and speciation, *Salmo salar*. 7289
clones, *Cyclotella*. 5661
cloning, *Paramecium bursaria*. 5848
control of radio-resistance, bacteria, algae. 5716
crossing of *Brachionus urceolaris* with *Brachionus quadridentatus*. 649
cytoplasmic inheritance, erythromycin resistant mutations, *Paramecium aurelia*. 7641
degree of compatibility, hybridization, *Bufo* spp. 5077
degree of similarity, electrophoretic analysis. 5606
determinations. 7562
distinction between Atlantic and Pacific forms of *Katsuwonus pelamis*. 915
duplication, *Hypomesus*, *Carassius*, *Cyprinus*. 5327
electrophoresis of soluble lens proteins of freshwater fish spp. 857
Engraulis mordax. 6393
enzymes, *Merluccius*. 3652
esterase isozymes, *Fundulus heteroclitus*. 8204
evolutionary divergence, *Bufo* hybrids, Australia. 6254
extrachromosomal nucleolar genes, amphibian oocytes. 289
extranuclear genes, *Chlamydomonas*. 7507
extranuclear genes, *Chlamydomonas reinhardtii*. 7508, 7509
gene amplification in oocytes, *Ascaris truei*. 6208
gene amplification in oocytes, *Dytiscus*, *Colymbetes*. 6077
gene dispersal, *Rana pipiens*. 6253
gene, *Xenopus* and *Triturus*. 2862
genetic map, *Chlamydomonas*. 5704
genetic methods for combating fish diseases. 872
genetic transformation, *Anacystis nidulans*. 8301
genic action and polymorphism in polyploid Amphibia. 301
genic time-factors effect on differentiation and growth. 6101
genome sizes, *Pisces*. 8040
genome transcription, *Misgurnus fossilis*. 7337
haemoglobin of *Artemia salina*. 1876
haploid cultures, *Rana pipiens*. 5114
heredity of caudal process in *Xiphophorus* spp. 949
heritability of linear body measurements in *Rana*. 769
hermaphrodites, *Merluccius productus*, Washington. 8151
heterocaryon, *Paramecium bursaria*. 4815
heterogamety, teleostei. 8078
hybrids, *Jaera albifrons*. 3401
hybrids, *Lytechinus*, *Tripneustes*. 7913
immunological and biochemical, *Thunniformes*. 8189
informosomes, embryos, *Nemacheilus*. 8118
inheritance, chloroplasts, *Cosmarium turpinii*. 4667
inheritance of resistance to thymus histones, *Amoeba*. 7630

Genetics, contd.

- inheritance, radiation induced spinal curvatures, *Lebistes reticulatus*. 4457
- interacting genetic systems, *Paramecium aurelia*. 6858
- interspecific behavioural differences, *Xiphophorus*. 6591
- isozyme polymorphism in *Mysis*. 1258
- isogamy, *Synura petersenii*. 8324
- Jaera albifrons* pigmentation. 3400
- karyoecology, Simuliidae. 7832
- lactate dehydrogenase genes, *Fundulus heteroclitus*. 2319
- lactate dehydrogenase, *Salvelinus*. 8111
- marine bacteria. 5777
- mating type heritance, *Tetrahymena pyriformis*. 4820
- melanoid variants, *Rana pipiens*. 3512
- Molara, Capraia. 4850
- mutagenes, *Anacystis nidulans*. 4609
- mutation process, *Chlorella kessleri*. 4689
- mutations, *Anacystis nidulans*. 4610
- mutations, growth characteristics, *Agmenellum*. 5631
- NADP isocitrate dehydrogenase, *Paramecium*. 3320
- neotony, *Salicornia stricta*. 4793
- non-Mendelian genes, *Chlamydomonas*. 5704
- nuclear division in *Ulva pertusa*. 1058
- phosphoglucumutase polymorphism, *Oncorhynchus nerka*. 8918
- phylogenetical relations of phycoerythrins. 1020
- Planaria*. 8486
- pleiotropic effects of golden colour gene, *Salmo gairdneri*. 7287
- Poeciliidae, tumour-inducing gene constellations. 3052
- polymorphic esterases, *Catostomus* spp. 8133
- polymorphism for LDH, transferrin loci, *Salvelinus fontinalis*. 8114
- polymorphism in *Asplanchna*. 1869, 1870
- polymorphism of soluble lens protein in *Salvelinus*. 856
- polyploidy, *Atractolytocestus huronensis*. 5885
- polyploidy, variation of DNA in micronuclei. 5848
- population genetics, molecular evolution. 4357
- Rana pipiens*. 8775
- recessive factor pigmentation, *Pleurodeles waltlii*. 5094
- RNA-DNA hybrid. 4249
- rRNA transcription unit evolution. 8087
- Rotatoria. 3342
- selection of *Salmo irideus*, aquaculture. 6431
- sex determination, *Dinophilus gyrotilatus*. 7703
- sex determination, *Gammarus duebeni*. 3411
- sex determination, hormone control, Arthropoda. 7712
- sex determination, *Tilapia mossambica*. 3676
- sex determination, *Tilapia mossambica* and *Tilapia hornorum*. 914
- soluble fish collagen. 7318
- sperm, *Misgurnus fossilis*, UV studies. 6473
- Sphaeroma rugicauda*, changes in genetic constitution of a population. 1937
- survival of haploid and diploid *Chlamydomonas* exposed to radiations of different LET. 1042
- teratology, conjoined twins, *Brachydanio rerio*. 6442
- Tilapia*, Malaysia. 5417
- transferrins, *Salvelinus fontinalis*. 8113
- transitional hemizygoty, G6PD, *Rutilus rutilus*. 5346
- triploids, *Rana esculenta*. 7991
- Ulva mutabilis*. 6776
- variation in activity of nucleolar organizers. 6221
- variation, *Limulus polyphemus*. 7836
- variation, stolon growth, *Campanularia flexuosa*. 7667
- Velella. 4848
- XY females caused by X-irradiation, *Platyopocilus*. 1633
- young cod. 3011
- Genicula, development in *Amphiroa*. 2536
- Genicularities articularis gen. et sp. n.**, (Ditrupinae), Mesozoic, Germany. 4882
- Genital complex**, Euchaetidae. 1889
- Gennadas sp.**, larvae, Gulf of Mexico. 7768
- Genus Romeis**. 6999
- Genyomyrus**, osteology. 4444
- Genyomyrus donnyi**. 5439
- Genypterus blacodes**. 8051
- Geocentrophora cavernicola sp. n.**, Virginia. 5901
- Geographic variations analysis**, statistical approach. 2440
- Geographical distribution**, see **Distribution**.
- Geography**, paleogeography, Mollusca, California. 4995
- Geology**,
 Bathonian, Ardennes Massif, France. 3184
 caves, Madagascar. 8432
 Lake Victoria. 2949
 Mediterranean Sea. 2466
 Pliocene-Pleistocene boundary, South Pacific deep-sea core. 1740
 shelf off Alagoas and Sergipe, Brazil. 2465
 shell composition as paleohydrological indicator. 4135
 Upper Tithonian, Bavaria. 5613
- Gephyrocapsa protohuxleyi sp. n.** 3808
- Germany**,
 distribution of Rivulogammarus in Baden-S Württemberg area. 208
 East Holstein, thiamine, bacteria and phytoplankton in lakes. 1809
 Lake Pluss, obligate methaneoxidising bacteria. 3292
 mussel cultivation sites. 3459
 river Weser, zooplankton. 1666
 upper Ruhr, limnology. 965
- "Germinal cytoplasm"**, origin in *Xenopus*. 774
- Germination**, *Cakile maritima*. 5808
- Gerres oyena**, hermaphroditism. 4408
- Gerris lacustris**, locomotion on water surface. 2728
- Gessnerium mochimaensis gen. et sp. n.**, taxonomy. 5765
- Ghana**,
 Volta Lake, bottom fauna. 3724
 Volta Lake, limnology and bilharzia. 3090
 Volta Lake, phytoplankton. 3061
- Gibbula cineraria**. 6118
- Gibbula umbilicalis**. 6118
- Giffordia sandriana**. 6728
- Gigantactis**. 8039
- Gigantactis macronema**,
 commensal with holothurians. 274
 commensalism with *Rynkatorpa pawsoni sp. n.*, California. 6180
- Gigantione moebi**, *Xanthias punctatus* as new host. 4090
- Gigartina tepida**. 6728

- Gills,
carbon monoxide diffusing capacity, *Ameiurus nebulosus*. 5318
cartilage, of *Limulus*. 219, 717
development of *Chaenogobius urotaenia*. 432
dimensions, of *Katsuwonus pelamis*, *Thunnus thynnus*, and *Thunnus albacares*. 916
disease in *Crassostrea angulata*. 733
modifications in oceanic fish. 911
movements of, central nervous control in *Aplysia*. 1975
Mytilus, synchronal coordination of cilium. 2014
Protopterus aethiopicus, efficiency. 3699
rakers, *Sardina pilchardus*. 2986
sodium uptake, *Salmo gairdneri*. 5297
vascularization, *Cottus gobio*. 3026
- Gillellus uranidae* sp.n., from tropical W. Atlantic. 888
Gillichthys mirabilis, control of prolactin release, role in colour change. 6498
- Ginglymostoma cirratus*. 6721
Ginglystoma, distribution, Georgia. 4295
Girella nigricans, visual field defects. 8990
Girvanella. 5629
Glabropilumnus. 8562
Glaciarcula bermudezi sp.n. 7929
Glaessneria arenicola gen.et comb.n. 8563
- Glands,**
adenohypophysial, argyrophil cells staining, *Salmo irideus*. 8924
adenohypophysis, ultrastructure, *Oncorhynchus keta*. 8911
adrenal, *Clarias lazera*. 8135
adrenocortical, biosynthesis of 18-hydroxycorticosterone, Teleostei. 7346
alkyl glyceryl ether biosynthesis, *Asterias forbesi*. 5044
androgenic, *Callinectes sapidus*. 6001
androgenic, *Pandalus platyceros*. 6035
antennal, Stomatopoda, larvae. 3403
antennal, transepithelial fluid movement, crayfish. 8567
cement, *Lepas* and *Balanus*. 1894
digestive, catalase activity, freshwater bivalve. 6129
digestive, effect of parasite *Plagioporus virens* on *Flumenicola virens*. 8666
digestive, in vitro incorporation of RNA precursors. 6105
ectodermal, histochemistry and autoradiography, *Rita rita*. 6480
effect of eyestalk removal on oxygen consumption in *Caridina rajadhari*. 8572
enamel organ of teeth, Pleurodeles. 8757
eyestalk, Orconectes viridis. 7790
Fundulus, adapted *Fundulus heteroclitus*. 7393
gas glands. 6509
hepatopancreas, *Astacus leptodactylus*. 7757
hepatopancreas, enzymes, *Cyprinus*. 8125
hepatopancreas, proteinases, invertebrates. 7616
hepatopancreas, zosterinase activity, invertebrates. 8431
hypophyseal target organs, histology, *Leucopsarion petersi*. 8175
infracerebral, *Nephtys*. 8532
ink-gland, *Lophotes cepedianus*. 5454
medio-intestinal, *Astacus fluviatilis*. 7756
neurosecretory, *Argulus foliaceus*. 6942
orbital, of emydine turtles. 327
pancreas, effects of intestinal extracts of lampreys, rat. 8876
pancreas, *Petromyzon marinus*. 8066
pancreatic enzymes, *Protopterus aethiopicus*. 7415
parathyroid, ultrastructure, *Triturus pyrrhogaster*. 8001, 8002
pineal, phototaxis control and colouration, *Salmo gairdneri*. 8108
pituitary, *Clarias batrachus*. 5329
pituitary, effects of transplantation, *Notophthalmus viridescens*. 8755
pituitary, hormones, *Squalus acanthias*. 8075
pituitary, responses to photoperiod, *Heteropneustes fossilis*. 8143
pituitary, synthesis and renewal of proteins, duck. 8016
proboscis, of *Argobuccinum argus*. 2743
responses of skin to noradrenalin, *Rana*, *Bufo*, *Xenopus*. 5136
salivary, *Limnaea stagnalis*. 7045
salt glands, *Limonium vulgare*. 4787
salt, secretion of *Pelampus platurus*. 328
scent gland ultrastructure, *Notonecta glauca*. 7012
shell gland, microfibrils, *Artemia salina*. 7715
sinus, of *Mysis relicta*. 2656
sinus gland extirpation effects, *Astacus leptodactylus*. 7757
skin and parotoid, *Bufo marinus*. 7956
skin gland secretion, *Salamandra maculosa*. 6267
spleen, mitosis, *Molge vulgaris*. 8754
thymus, *Clarias lazera*. 8136
thymus, possible origin of lymphosarcoma in *Salmonidae*. 4346
thyroid, iodoamino acid, *Scarus guacamaia*. 5410
thyroid, *Lampetra planeri*. 8065
thyroid, relationship with sexual cycle, growth, *Agonus cataphractus*. 4397
ultimobranchial, calcitonins, salmon. 8089
X-organ of *Mysis relicta*. 2656
- Glaridacris catostomi*. 5882
Glaridacris confusa. 5882
in *Ictalurus* spp. 2591
- Glaucidae**, Australia. 8655
Glaucosphaera vacuolata, ultrastructure, physiology. 8304
- Glenodinium**. 3849
Glenodinium foliacium, ultrastructure of eye-spot. 3850
- Gloiovascular system**,
of Cephalopoda. 269
ultrastructure in Octopus. 270
- Globicephala melaena*. 5159
distribution, Genoa. 5155
host to Plicobothrium globicephalae gen.et sp.n. 1180
skull structure. 5156
- Globicephala sieboldi*. 7218
Globigerina, fossils, North Dakota. 5839
Globigerina ampliapertura. 7624
Globigerina bulloides. 4801
Globigerina pachyderma. 4801
Globigerinatella insueta. 7624
Globoconusa. 5839
Globorotalia. 5839
Globorotalia menardii, living fossil, Indian Ocean. 7636
Gloeocapsa alpicola, fixation of phycobiliproteins to photosynthetic membranes. 5751
- Gloeodinium cracoviense**. 6796, 8390
Gloeotrichia ghosei, heterocyst germination. 8305
Gloeotrichia pisum. 3799
Gloiopeltis, spore liberation and germination, Japan. 4711

- Gloiopeltis furcata*. 3189
Glossanodon sp.n., Indian Ocean. 8898
Glossanodon struhsakeri sp.n., Hawaii. 8907
Glossiphonia complanata, cuticle. 1872
Glossiphoniidae,
 ecology. 6924
 keys. 6923
Glossobalanus corzieri, biochemistry. 8727
Glossogobius giurus, maturity, Laguna de Bay. 3681
Glossogobius olivaceus,
 ecology, Japan. 8169
 reproductive behaviour. 8170
Glucan hydrolase,
Euglena gracilis. 4740
 purification, *Euglena gracilis*. 4741
Spisula sachalinensis. 8682
Glucokinase, Chlorophyceae, Cyanophyceae. 6749
Glucose, assimilation from seawater by nematodes. 1187
 1187
Glucose-¹⁴C, uptake and transformation by *Lanice*
conchilega. 1201
Glucose-6-phosphate synthesis, regulation in *Euglena*
 and *Rhodospseudomonas* in relation to culture
 conditions. 1077
Glucose uptake, effect of decompression on micro-
 organisms. 3855
 α -*Glucosidase*, skipjack liver. 2307
Glucuronidase, histoenzymology, *Rana tigrina*. 8779
Glutamate dehydrogenase,
 biosynthesis, Amphibia. 4242
Chlorella. 557
Glutamate pyruvate transaminase, regulation, *Rana*
hexadactyla. 3518
Glutamic acid, decarboxylation, *Chlorella*. 8347
Glycera, role of proboscis. 5937
Glycera convoluta, tongue-shaped appendices of
 proboscis. 6922
Glycera dibranchiata, function of coelomic cell haemo-
 globin. 8527
Glycera tessellata. 8522
Glyceria aquatica, distribution, littoral, Czechoslo-
 vakia. 6822
Glycerol, excretion by nematodes. 1866
Glycerol kinase, utilization, *Salmo gairdneri* liver.
 7286
Glycine, uptake by Cyanophyceae. 3799
Glycine-C¹⁴, influence of age on uptake by *Neanthes*.
 654
Glycogen,
 in gastrulae of *Xenopus*. 773
 in interrenal gland of *Salamandra*. 324
Glycogenolysis, and AMP, frog gastric mucosa. 312
Glycollate oxidoreductase, regulation with protein
 synthetic capacity, *Chlamydomonas mundana*.
 7506
Glycollic acid, in natural waters. 3101
Glycolysis,
 effect of O₂ on end-products in *Rangia cuneata*. 2017
 enzymatic activity in Crustacea. 5987
Glycolytic enzymes,
 activity, Crustacea. 5987
 enzymes, changes during frozen storage, molluscs.
 5031
Glycymeris yessoensis. 7618
Glyiauchen papillatus. 5880
Glythelmins hylareus sp.n., life history, Lymnaea,
 Hyla. 5902
Glyptotendipes, taxonomy. 8622
Glyptothorax jalalensis sp.n., Afghanistan. 8861
Gnathonemus,
 osteology. 2971
 tuberos organs, effects of temperature. 7398
Gnathonemus petersii,
 ampullary organs. 5451
 conditioning, electroperception. 5452
 electroreceptor ultrastructure. 4453
Gnathostoma spinigerum. 8517
Gnathostomata, pharyngeal denticles. 6362
Gnathostomula spp., sperm morphology and spermatogenesis. 1176
Gnathostomulidae, ultrastructure. 2595
Gnorimosphaeroma salebrosa sp.n., Japan. 3412
Gobiesocidae, taxonomy, distribution, Panama. 3687
Gobiidae,
 ecology, brackish water environment. 8171
 taxonomy. 4383
Gobio. 4855
Gobio gobio. 8860
 pharyngeal teeth. 408
 Poland. 6463
 River Thames. 3001
Gobio gobio obtusirostris, growth rhythms. 8962
Gobiosoma (Austrogobius) polyporum, sp.n., from
 Panama. 892
Gobius. 4401, 6371
 ecology, brackish water, Corsica. 3657
 morphological variations in bucco-pharyngeal
 cavity. 8991
Gobius cobitis, ecology, British Coast. 7358
Gobius ephippiatus, systematics and biology. 893
Gobius macrolepis, taxonomy. 893
Golfingia mirabilis sp.n. 7137
Goldfish, see *Carassius*.
Golgi apparatus,
 function in *Amoeba* and *Chaos*. 90
 in tetraspores of *Griffithsia*. 2541
Pleurochrysis scherffellii, production of cellulosic
 wall component. 1768
 producing cellulosic wall component in *Pleurochrysis*
scherffellii. 1036
 relationship to wall formation in *Pleurochrysis*
scherffellii. 1039
Gomphidae, distribution, South America. 7001
Gomphoides fuliginosa. 7001
Gomphonema. 4508, 6742
Gomphonema parvulum var. *parvulum*. 3792
Gomphonema parvulum var. *subellipticum*. 3792
Gonads,
 development, effect of day length and temperature in
Gasterosteus. 929
 effect of gonadectomy on salmon pituitary. 371
 embryogenesis, *Stenella caerulealbus*. 338
 pigments, *Holothuria leucospilota*. 2826
Thunnus atlanticus, histology. 919
Gonatopsis borealis, growth patterns. 2812
Gonatopsis japonicus sp.n., Japan Sea. 4169
Gonatopsis octopedatus, distribution, Japan Sea. 7096
Gonatus fabricii. 7897
 growth patterns. 2812
Goneplacidae,
 revision and creation of new genera and species. 4045
 taxonomy. 1247
Goneplax. 5551
Goniada. 7440
Goniasteridae, ecology, Straits of Florida. 6177
Goniobasis clavaeformis, feeding rates. 2752

- Goniodoma**, reproduction asexual. 3287
Goniolithon, systematics. 3841
Goniolithon cystoseira. 3841
Gonionemus vertens,
 effect of sting. 120
 polyps, behaviour. 6892
Goniophora, unique asexual reproduction. 636
Goniopora nigra sp.n. 3923
Goniopsis cruentata, agonistic behaviour, Aratus. 3383
Gonodactylus. 7746
Gonodactylus bredini, aggressive communication. 8580
Gonostoma. 5442
Gonostomatidae. 7232
Gonostomidae. 4306
Gonyaulax. 5488, 6714
Gonyaulax catenella. 3545, 5443
 cause of toxic shellfish. 6131
Gonyaulax grindleyi, from the North Sea. 1080
Gonyaulax pacifica,
 perinuclear structural elements. 3851
 population studies. 3851
Gonyaulax polyedra,
 absolute values of photon emission. 587
 bioluminescence. 1805
Coreauella auriculata, gen.et sp.n. (Spongillidae). 3911
Gouldia altanai sp.n. 7877
Gouldia foresti. 7877
 α -GPD, index of iced-storage age, *Melanogrammus*.
 4390
G3PD, reactive lysine, *Homarus vulgaris*. 6973
G6PD,
 algae. 3846
 following fertilization, *Anthocidaris crassispina*.
 5042
 heterogeneity, vertebrates. 5610
Rutilus rutilus. 5346
GPT amylase, *Cyprinus*. 8124
Gracilaria. 6714
 agar. 6788, 7539
 production of gelatinising substances. 3271
Gracilaria chorda, male reproductive organs. 2540
Gracilaria confervoides, ecology, Adriatic. 5744
Gracilaria foliifera. 8281
Gracilaria gigas, male reproductive organs. 2540
Gracilaria sublittoralis, male reproductive organs. 2540
Grafting,
Ambystoma mexicanum pituitary xenografts on
Notophthalmus viridescens. 2049
Anura and *Urodela*. 7145
 autotransplanted pituitary, *Notophthalmus viridescens*. 6231
 behaviour, reflexes, *Rana* spp. 6256
Dugesia lugubris. 8498
 extent to which primary ureter is inducing agent on
 mesonephros of *Anura*. 5080
 gonads, *Asterina gibbosa*. 7915
 histoincompatibility in *Helisoma duryi*. 6112
 immunology, *Helisoma duryi* normale. 8656
 interspecific nuclear graft, *Pleurodeles*. 8756
 regeneration of complete *Hydra* from isolated
 epidermal explants. 5873
 transplantation immunity, *Ambystoma mexicanum*.
 6206
 transplanted pituitary glands, *Notophthalmus viridescens*. 6232
 xenoplastic transplantation of somitic cells, from
 anuran to urodele. 6260
Xenopus laevis. 6285
Grammotaulius. 4977
Grampus griseus, sound production. 4259
Grandiderella dentimera sp.n., Gulf of Mexico,
 Caribbean. 6018
Grantia compressa. 6882
Grants for research etc. 6715
Graptemys geographica, occurrence of Trypanosomes.
 1149
Graptemys nigrinoda, taxonomy, Alabama. 3532
Grapsus. 4911
Graptobreis. 6937
Grateloupia dichotoma, chlorophyll d isolation. 4712
Grateloupia livida. 3189
 occurrence of organic acids. 5745
Grateloupiaceae, sulphated polysaccharides. 7541
Grazing rates, *Diaptomus oregonensis*, British
 Columbia. 4000
Greenland,
 coastal waters, chlorophyll α distribution. 1657
 distribution of Reinhardtius and Hippoglossus eggs
 and larvae. 1638
Molva dypterygia. 3018
Pandalus borealis. 2681
Papenfussiella callitricha. 3260
Gregariella simplicifilis. 6145
Griffithsia. 4705
 ionic fluxes. 6789
Griffithsia flosculosa,
 evolution of Golgi-body during tetrasporogenesis.
 4713
 Golgi apparatus in tetraspores. 2541
Grimatroctes oligolepis, sp.n., southeast Atlantic.
 8908
Ground water, Lake Långsjön. 9059
Growth,
Achlya ambisexualis. 6819
Acmaea digitalis. 4999
 adaptation, *Chlorella pyrenoidosa*. 6761
 aging, *Oncorhynchus masou*, Japan Sea. 7281
 Algae, effects of light intensity. 2507
 Algae in relation to mud phosphates. 2519
 allometric. 6984
 amino acids, *Saprolegnia*, *Achlya*, *Leptolegnia*,
Dictyuchus. 5805
Anacystis nidulans, ultrastructure. 1750
 and sexual maturity, of *Ocypode quadrata*. 1264
Anguilla australis, *A. dieffenbachii*. 2314
 antennae, *Microcyclops minutus*. 8546
Artemia salina. 7714
Artemsia longinaria. 2642
 as affected by environment in *Saccorhiza polyschides*.
 579
Asellopsis intermedia. 2629
Asellus aquaticus. 1232
 bacteria above 90°C. 593
 bacterial, effect of aeration of waters. 1821
Benthosema glaciale, Northwest Atlantic. 4443
 biochemical studies during, in *Anacystis nidulans*.
 1024
 biological description, Pisces. 6322
 body size variations, *Salmo gairdnerii*. 5294
Catostomus catostomus, Lake Superior. 401
Chaetomorpha darwinii. 34
 changes in chlorophyll, *Chlamydomonas stellata*.
 8331
 characteristics of selected mutants, Cyanophyta.
 5631
Chione stutchburyi. 7875

Growth, contd.

- Chirocephalus, effect of temperature on. 666
 Chironomus salinarius, larvae. 1951
 Chlamydomonas, effect of methyl glyoxal. 1043
 Chlorella. 7518
 Chlorella vulgaris. 3825
 Chlorogonium, Hyalogonium. 5718
 chloroplasts, Euglena. 5764
 colourless Chlamydomonas, inhibited by light. 558
 compensatory, Pisces. 7271
 condition factor, Tilapia nilotica. 7373
 copper influence, Chlorella pyrenoidosa. 8346
 Coregonus nasus in Mackenzie and Coppermine rivers. 830
 Crangon crangon. 184
 Crucibulum spinosum. 1982
 culture mussels, Wadden Sea. 2009
 Cyanophyceae. 7490
 Cynolebias bellottii. 456
 determination, Sebastes, Newfoundland. 6522
 Dunvella tertiolecta. 3063
 Durvillea. 2528
 ecological factors Chaetoceros affinis. 3806
 effect of CO₂, in Ranunculus and Myriophyllum. 1133
 effect of cultivation conditions. 3797
 effect of exchange of water on growth, Pinctada. 3474
 effect of feeding before and after yolk absorption in Oncorhynchus. 844
 effect of inhibitors, Anabaena variabilis. 8299
 effect of limited food supply on trout and salmon. 378
 effect of maleic hydrazide on Anacystis nidulans. 3795
 effect of numbers, Pinctada. 3474
 effect of oxygen, Esox lucius. 6397
 effect of prolactin on tadpoles. 5140
 enhancement by glycerol, phytoplankton. 8222
 environmental influences on development, Esox lucius, South Dakota. 6396
 Esox lucius in Polish rivers. 831
 essential amino acids, Ictalurus punctatus. 7331
 estimation, Caribbean waters. 5670
 Euglena during division cycle. 2539
 Eurytemora. 5972
 fish, use of drugs to increase growth rate. 7249
 Gasterosteus aculeatus. 7396
 general, Gymnodinium breve. 3288
 genic time-factor effects, snail shells. 6101
 glucuronidase in liver, Rana tigrina. 5122
 Gobio gobio obtusirostris. 8962
 Gonatopsis borealis and Gonatus fabricii. 2812
 graphical estimation. 4559
 Harpodon nehereus, Hooghly Estuary. 7327
 Hymeniacidon perleve, Hampshire. 8463
 IAA effects, Ulva lactuca. 7526
 Ichthyomyzon fossor, Lake Superior. 7251
 Ictalurus punctatus, USA. 6467
 inhibition by xylulose, Chlorococcum echinozygotum. 4666
 inhibitors, Chlorophyta, acrylic acid. 5688
 inhibitors, irradiation, Campamalaria flexuosa. 5864
 isolated shoot apices, Eichhornia crassipes. 5810
 Jasus lalandii. 193
 jaw-tagged Salmo. 858
 Labidesthes sicculus, Indiana. 6564
 Lagodon rhomboides, distribution. 4409
 Laminaria hyperborea under total darkness. 5735
 larvae, Callinectes sapidus. 6000
 larvae, Lampetra fluviatilis. 8872
 length-weight relationship, Esox niger, Mississippi. 5268
 length-weight relationship, Labeo rohita. 6470
 length-weight, Tilapia spp. 5419
 light influence, embryos, Nematodon. 5747
 Limanda ferruginea, New England coast. 6566
 Limanda Herzensteini, Japan. 7399
 Limanda yokohamae. 463
 limitations, in algae of Central African waters. 1015
 linear, peculiarities, Abramis brama, Kakhovka reservoir. 8937
 Littorina littorea shell. 2758
 Lucioperca, River Dnepr. 7362
 Lymnaea stagnalis. 232
 Macrodon ancylodon. 4375
 mathematical description. 6984
 mathematical description, Bertalanffy equation. 4558
 mathematical description, Dicathais. 7860
 mathematical description, Epinephelus morio, Gulf of Mexico. 6496
 mathematical description, fish yield, freshwater environment. 3734
 mathematical description, Labeo rohita. 6470
 mathematical description, Limanda ferruginea, New England fisheries. 6566
 mathematical description, Macrodon ancylodon. 4375
 mathematical description, Merluccius capensis. 3650
 mathematical description, Oryzias latipes. 9038
 mathematical description, phytoplankton. 8221
 measurement, Sphagnum. 5818
 mesonephros, Rana dalmatina, larva. 4222
 Micropterus dolomieu, Ontario. 8177
 Mirounga leonina. 791
 Morone chrysops, Mississippi River. 8995
 nitrate uptake, phytoplankton. 5503
 nucleic acid content and cell numbers, brain, Octopus vulgaris. 7101
 Octopus cyanea. 5036
 Oncorhynchus. 8099
 Oncorhynchus keta under different feeding regimes. 377
 Oncorhynchus nerka, Alaska. 2978, 6412
 otolith patterns, Merluccius bilinearis, Gulf of Maine. 6485
 Pagellus centrodonatus. 901
 parameters in normal and actinomycin-prolonged cycles, Tetrahymena. 5852
 Parophrys vetulus, California. 6578
 Parophrys vetulus, Puget Sound. 6577
 patterning, dating, Bivalvia. 7875
 patterns, Spirogyra, Closterium. 4695
 Penaeus kerathurus. 6984
 Perca fluviatilis in 1st year. 441
 periodicity of growth in algae. 3834
 photoinhibition, Acanthamoeba castellanii. 7629
 phytoplankton. 6638
 Pisces, Lake Glubokoye. 8859
 plankton, phosphorus-limitation. 3709
 Pleuronectes platessa, artificial feed. 6582
 Pleuronectes platessa, feeding rate. 4470
 Polytomella caeca. 5725
 postembryonal, Hemiramphus, Chrysophrys, Zebria. 5453
 Prionotus evolans, Chesapeake Bay. 6514
 promoters, gibberellins, algae. 3188
 Psammechinus miliaris. 2829

Growth, contd.

- rate, as affected by light intensity and population density in *Porphyra*. 1083
- rate, bacterial, estimations in natural waters. 1106
- rate, bivalves, as affected by light. 742
- rate, *Chlorella*. 3823
- rate, *Cyclotella*, *Thalassiosira*. 4622
- rate, effect on DNA content of *Astasia longa* cells. 1087
- rate, *Odonata*. 7825
- regeneration, *Uronema gigas*. 6777
- regulators, cytokinins in *Ecklonia* and *Hypnea*. 56
- relative growth, *Acanthocyclops viridis*. 3354
- relative growth, *Agonus cataphractus*. 4397
- relative growth, *Alestes baremoze*, Lake Chad. 4358
- relative growth, algae, sea urchin spines. 3496
- relative growth, *Calliarthron*, California. 3266
- relative growth, *Clarias* spp. 3629
- relative growth, cytodifferentiation, *Balanus perforatus*. 3366
- relative growth, genetic correlation, carp. 3634
- relative growth, hydromedusae, Barents Sea. 3331
- relative growth, *Lateolabrax japonicus*. 5396
- relative growth, leaf development, *Victoria amazonica*. 3312
- relative growth, Pisces, South Sakhalin. 8858
- relative growth, relation to amino acids, *Laminaria*. 3258
- relative growth, *Scomber japonicus*, Japan. 4351
- relative growth, *Terebratalia transversa*. 3499
- relative, *Oncorhynchus keta* fry. 2975
- requirements of *Catenaria anguillulae*. 3862
- Rutilus rutilus*. 8967
- Sabellaria* larvae. 2618
- salinity effects, *Dasya pedicellata*. 5740
- Salvelinus fontinalis*, Maine. 7296
- Salvelinus leucomaenis*, South Sakhalin. 8858
- Scrobicularia plana*, North Wales. 7090
- sea urchin. 7907
- seasonal variations, *Obelia geniculata*, New Zealand. 3333
- Serranus* spp, Mediterranean. 5415
- shell, *Cymatiidae*, New Zealand. 7844
- shoots, *Typha latifolia*. 7608
- spiralling, Protozoa. 7628
- Spirula spirula*. 2815
- squamation chronology, *Pimephales promelas*. 5343
- stimulation by X-rays, *Hydra*. 6893
- stimulation in *Enteromorpha* by organic substances excreted by *E. linza*. 1052
- stolon, *Campanularia flexuosa*. 7667
- temperature and light intensity effects, *Dictyosphaerium*. 4612
- Tilapia*, influence of season. 2299
- Trachinotus carolinus*, Louisiana. 6531
- ultrastructure of growth margins in brachiopods. 281
- Ulva*, effect of ammonia nitrogen. 576
- Ulva fasciata*. 8370
- variations in alginic acid content, *Sargassum* spp. 8378
- veliger larvae, *Crepidula*, *Nassarius*. 6120
- Venus mercenaria*, Mediterranean. 4168
- Guam, cowries. 226
- Guianas, sea turtles. 3539
- Gulf of Alaska,**
- Pandalus borealis*. 2675
- salmon movement. 3611
- Gulf of Guinea,** Pisces. 3021
- Gulf of Mexico,**
- Penaeus aztecus* abundance. 2674
- Penaeus* juveniles. 2692
- productivity. 3080
- Seahorse Key, forams. 3883
- shrimp fishery, discarding practices. 2686
- Gulf of Naples,** tin in organisms and in water. 2463
- Gulf of Omega,** Mollusca, Holocene. 1971
- Gulf of St. Lawrence,** *Ariomma bondi*, *Caranx crysos* and *Selar crumenophthalmus*. 3025
- Gunnera,** symbiotic with *Nostoc*, nitrogen fixation. 1756
- Gurupiscis kumu.** 8051
- Gut, interacting with nerve-cord in sabellid regeneration. 657
- Gymnaster pentasterias.** 3885
- Gymnocorymbus ternetzi.** 4759
- Gymnodinium.** 3849, 6714
- Gymnodinium breve,** responses to natural water. 3288
- Gymnodinium fuscum,** fine structure. 585
- Gymnogongrus norvegicus,** distribution, ecology, Mediterranean. 7540
- Gymnogongrus playphylla.** 6728
- Gymnothamnion elegans,** germination of tetraspores. 8382
- Gymnothorax.** 8041
- chemoreception in lateral-line systems. 812
- toxin, Johnston Islands. 9033
- Gymnothorax javanicus.** 8856
- Gymnotus carapo,** regeneration of electric organ. 8963
- Gymnura,** anormality, Gulf of Kutch. 4297
- Gynogenesis,** induced by radiation in fish. 815
- Gypsum crystals,** formation in *Pleurotaenium trabecula* in relation to Ca ion concentration. 1037
- Gyraulus.** 7019
- Gyrinidae,** wave-making. 1953
- Gyrinoidea,** ethology and ecology. 1954
- Gyrodactylus,**
- new species. 1182
- parasites in *Apeltes quadracus*, Newfoundland. 6549
- Sweden. 8496
- Gyrodactylus ambystomae,** parasite of *Ambystoma macrodactylum*, California. 5903
- Gyrodactylus aurorae sp.n.,** parasite of *Rana a. aurora*, California. 5903
- Gyrodactylus avalonia.** 6549
- Gyrodactylus cameroni sp.n.,** Newfoundland. 6549
- Gyrodactylus canadensis.** 6549
- Gyrodactylus luciopercae,** from fish in the Danube Basin. 1861
- Gyrodactylus unicopula,** from *Pleuronectes platessa*. 1860
- Gyrodinium cohnii,**
- nature and processing of rRNA. 7556
- nuclear division. 586
- nuclear reproductions. 1806
- Gyrodinium dorsum,**
- change in photoresponse action spectrum. 7557
- circadian rhythm of behavioural photoresponse. 7558
- phototactic orientation mechanism model. 5766
- Gyrosigma diversitatum sp.n.** 5656
- Gyrosigma marginatum sp.n.** 7495

H

Habemula, anatomy, teleosts. 7342

Habitat, (see also Ecology).

- ice. 486
- selection, *Acanthurus triostegus sandvicensis*. 3022

Habitat improvement,

- fertilization, for pond fish. 3594
- for *Oncorhynchus* spp, Washington. 8915
- Kirovograd region. 8866

Hauprionovola, gen.n. 4120

Haematin compounds, effect on rancidity, fish, scallops and lobster. 1735

Haematoloechus. 5908

Haematology, see Blood, Blood cells and Blood liquids.
Haematopus ostralegus, anatomy of bill. 8822

Haementeria costata, Southern Olsztyn, Poland. 139

Haemocyanin, (see also Pigments).

- crab, starch gel electrophoresis. 1244
- Loligo pealei*, O₂-linked dissociation of. 749

Haemoglobin, (see also Pigments).

- genetics, of *Artemia salina*. 1876
- immunochemical comparison, tadpole and frog. 2059
- isolation, *Cyzicus hierosolymitanus*. 6012
- O₂ affinity, *Scyllorhinus canicula*. 359
- tuna. 2304

Haemolymph, precipitin-like reaction of, Homarus. 192

Haemolysates, Triton cristatus. 2064

Haemolysis, by Vibrio spp. 75

Haemonchus contortus. 7691

Haemonia sp. 8614

Haemopsis, parasitism by Alloglossidium hirudicola sp.n. 5884

Haemopsis sanguisuga, morphology of nephridia. 6925

Haemulidae. 8488

Haemulon aurolineatum. 894

Haemulon plumieri, intestinal amino-acid transport. 3658

Hafnia strs, histamine formation. 4758

Hairs, flagellar, Chrysophyceae, Xanthophyceae. 8284

Haiti, Gambusia pseudopunctata sp.n. 3690

Halacaridae, Romania. 1964

Halacurus basteri basteri, biology and ecology. 714

Halalaimus, anatomy of amphid. 7697

Halarachnion ligulatum. 8389

Halargyreus affinis. 5164

Halargyreus johnsonii, distribution, New York Bight. 8149

Halibut,

- gear selection in fishery, Pacific. 4385
- viability of tagging Pacific halibut. 4386

Halicarcinus, hybridization and sibling spp. 2647

Halicarcinus lacustris, Australia. 4046

Halicarcinus platanus, larval development and distribution. 188

Halichoerus grypus,

- exploitation, Scotland. 4263
- karyology. 6305
- seasonal movements and diurnal activities. 5157
- twins, Scotland. 332

Halichondria panicea. 6877, 7089

- cell adhesion. 6885

Haliclona ecbasis, ecology, California. 8462

Haliclona oculata, cell adhesion. 6885

Haliclona rosea. 6883

- collagen, spongin and mineral skeleton. 5858

Halicryptus. 9069

Halicryptus spinulosus. 5544, 5545

Halicyclops magniceps, new to Belgium. 671

Halicystis. 8326

Halidrys siliquosa. 8277

Haligena. 6815

Halimeda. 8326

- rate of calcification, Cayo Enrique Reef. 4672
- ultrastructure calcification. 1779

Halimeda copiosa, synonymy. 2515

Halimeda hederacea, synonymy. 2515

Halimeda lacrimosa, variety, Bahamas. 43

Haliotis. 6714

- new species, Eastern Pacific. 7040

Haliotis discus, chromatographic analysis of acid-soluble nucleotides of mantle. 6139

Haliotis discus hannai, ecology, Japan. 7862

Haliotis midae,

- current influence, Cape Agulhas. 4525
- distribution, South Africa. 3442

Haliotis rufescens,

- digestion. 6111
- shell bored by *Penitella conradi*. 2802

Halipegus phrynobatrachi sp.n. 3944

Haliptylon, taxonomic values of reproductive organs. 4710

Halocynthia. 6631

- taxonomy. 2045

Halocynthia aurantium,

- haematology. 8728
- histochemistry. 8729

Halocypriformes, distribution, eastern tropical Atlantic. 3986

Halodule emarginata, sp.n., Brazil. 7603

Halogens, polarographic determination, algae. 5623

Halonectria. 6815

Haloniscus searlei, osmoregulation. 1912

Halophryne dussumieri. 8192

Halosphaera viridis, fatty acids, chromatography. 7559

Halteria. 3889

Halteria bifurcata, new species, Indiana. 100

Halteria grandinella, Indiana. 100

Halterioforma. 3889

Hamodactylus, key, Indo-Pacific. 4909

Hamopontonia corallicola, (Pontoninae) gen.et sp.n., Pacific. 3396

Handling of fish, recommendations. 3589

Hannaites quadria, gen.et sp.n. 3814

Hanseniaspora. 5798

Hansemula. 5798

Hantzschia. 5660

Hantzschia virgata, taxonomy. 5674

Hapladena tanyorchis. 5880

Haplochromis burtoni, effect of releasers on attack-readiness. 434

Haplochromis nubilus. 5532

Haplometroides eburnense. 3944

Haploporidae. 5880

Haploscoloplos. 3974

Haplostomella australiensis, hatching and larval development. 4006

Haprophyceae. 7487

Haptophyceae. 4633

Harengula thrissina. 8041

Harmathoe imbricata, seasonal changes of neuro-secretory cells. 140

Harmothoe impar. 6926

Harmothoe sarsi. 5545, 9069

Harpacticidae, new species, Pyrenees. 7725

Harpacticoida,

- Bulgaria. 155
- Czechoslovakia. 161
- distribution, North Italy. 3997

Harpacticoida, contd.

- Gulf of Marseille. 162
Réunion. 2630
Romanian caves. 160
Scilly Isles. 4887
substrate specificity. 8543
Thalestridae from Bahamas. 669
- Harpagifer**, from southern Chile. 886
- Harpagifer bispharmis**, anatomy of hypothalamus. 4419
- Harpodon nehereus**. 7343
age and growth, fishery, Hooghly Estuary. 7327
- Harrietella simulans**, associated with *Limnoria tripunctata*. 1218
- Harrimania kupfferi**, structure, nerve fibre layer and neurocord. 4211
- Hartmanella castellanii**, lysosomal activity and control of encystment. 3886
- Hatcheries**, carrying capacity, salmonid hatcheries. 4312
- Hatching**,
Culicoides furens, Florida. 4101
Dissonus nudiventris. 4001
effects of agricultural chemicals, *Carassius carassius*. 8132
emergence, Chironomidae, Arkansas. 8611
Haplostomella australiensis. 4006
hatching substance, *Balanus balanoides*. 3365
oncospheres of *Lacistorhynchus tenuis* from coracidia. 5904
- Hatching enzyme**,
activity, *Oryzias latipes*. 7409
chromatography, *Oryzias latipes*. 6571
- Hauffenia**. 7023
- Haustoriidae**,
ecology and life-cycle. 187
physiological tolerances and behaviour responses to environmental factors. 1248
- Haustorius arenarius**, distribution, biology, Netherlands. 3413
- Hawaii**,
Crucibulum spinosum. 1982
freshwater lakes. 3097
Laurencia. 2546
Learchis distribution. 3456
new species of *Rhipidiphyllon*. 46
ornithology. 3542
pathogenic fungi. 605
Raorhynchus terebra. 3954
- Heart**. 7316
acetylcholine, *Bivalvia*. 5027
anatomy, *Clarias batrachus*. 7309
blood supply, Pisces. 8854
branchial, Cephalopoda. 2817
cardiac ganglion, *Limulus polyphemus*. 6093
cardiac output, *Cyprinus carpio*. 5333
cardioactive agents, bivalve. 3465
cardioregulatory nerves, *Limulus polyphemus*. 8637
drug effects, frog. 7995
ECG, pH effects, Teleostei. 8079
ECG, *Tursiops truncatus*. 4268, 8032
effect of antibiotics on, *Paratelphusa masoniana*. 198
electron microscopy, *Procambarus clarkii*. 7804
features of heart valves, water mammals. 7211
frequency, anuran larvae. 2887
granulated cells, *Lymnaea stagnalis*. 7046
hydrostatic pressure within, *Patella vulgata*. 7868
influence of temperature on dilation capacity, frog. 7982
innervating neurons, *Lymnaea stagnalis*. 8660
intrinsic rate, *Heterodontus*, *Platyrrhinoidis*. 8881
isolated frog ventricle, effect of local anaesthetics. 2086
Lymnaea stagnalis, effect of 5HT on phosphorylase activity. 2784
lymph heart, physiology, *Triturus* spp. 5134
myocardium sensibility, effects of neurotropic agents, frog. 8800
nerve fibres, *Aplysia californica*. 6102
pace-maker activity, frog. 6237
pericardiac sac, ultrastructure, *Poecilia reticulata*. 3697
pericardial lining, *Quadrula nodulata*. 7873
quantitative analysis, slow component of delayed rectification, *Rana ridibunda* atrial muscle. 6238
redistribution of cardiac output in diving Alligator. 777
situs correlations, *Triturus alpestris*. 5124
Squilla oratoria, inhibitory synapses on pacemaker neurons. 1943
synthesis of adrenalin, *Petromyzon marinus*. 7255
temperature modulation, adreno-receptors, frog. 7962
Tunicata. 5061
ultrastructure, *Botryllus schlosseri*. 4206
ultrastructure, *Lampetra fluviatilis*. 6356
ultrastructure, *Myxine*. 806
ultrastructure, *Sepia officinalis*. 3492
vena cava, *Rana*. 2888
- Heat tolerance**, see **Temperature tolerance**.
- Hecatonema maculans**, culture of *Myriotrichia* from zooids. 1787
- Hedophyllum sessile**, development of gametophytes in saline pond water. 1784
- Helcogramma elliotti**. 8163
- Helgoland**,
bottom fauna and pollution. 2437
fungi from wood substrates. 1122
- Helgoland Bight**,
associations in benthos. 2399
macrofauna and meiofauna. 2400
seasonal fluctuations, fauna. 2398
- Helgolandinium subglobosum**, gen. et sp. n., from the North Sea. 1081
- Helicodictyon planctonicum**, Florida. 2516
- Helicoprion**, Permian, Spitsbergen. 2944
- Helicoprionodon multinucleatum**, ultrastructure. 7637
- Helicospaera (Coccolithus) carteri**. 3812
- Hellocolenus percoides**. 8051
- Heliocranchia pfefferi**, buoyancy mechanisms. 6156
- Heliozoa**, microtubules in axopodia. 3878
- Helisoma duryi normale**,
immunology, histoincompatibility. 6112
transplantation immunity. 8656
- Helium**, effects on growth of *Chlorella sorokiniana*. 3823
- Helobiae**, distribution. 5807
- Helophorus orientalis**, parthenogenesis, Siberia, North America. 6079
- Helostoma temminckii**,
ectoderm ultrastructure. 8992
gill-cell ultrastructure. 8172
- Haemadsorption reaction**, of *Tetrahymena* with measles virus. 2575
- Hemicentrotus**. 7124
- Hemicentrotus pulcherrimus**,
aster-equatorial surface relations and furrow

Hemicentrotus pulcherrimus, contd.

- establishment. 275
- development of secondary sexual characteristics. 6178
- effects of treating unfertilized eggs with DNP. 7114
- egg cleavage intermitters. 7916
- spermatozoa fractions. 5049
- Hemichordata**. 8241
 - evolution of musculature. 8725
- Hemidiaptomus**. 3979
- Hemigrapsus**, parasitism by Portunio conformis. 4077
- Hemigrapsus edwardsi**, rhythmic activity, New Zealand. 3397
- Hemigrapsus nudus**, effects of photoperiodism on moulting. 7769
- Hemimacrus acrolepis**, parasitism by Cyclocotylodes pinguis, Oregon. 5888
- Hemioniscus balani**, buccal apparatus, alimentary mechanism. 3398
- Hemipodus**. 7440
- Hemiptera**. 6621, 7834
 - Lake Chad. 3427
 - parasitized by Eylais spp. 2716
- Hemiramphus**. 5188
- Hemiramphus marginatus**, biology. 4454
- Hemiramphus sajori**. 5453
- Hemiselmis**. 5756
 - ultrastructure. 4743
- Hemispora**, control in salted Thyrsites atun. 3587
- Hemithyris psittacea**. 7651
- Hemimurus communis**. 5382
- Hepatectomy**, Anguilla japonica. 2313
- Hepatus epheliticus**. 5863, 8553
- Hepsetus**, osteology. 5335
- Heptagenia quadrilineata**, sp.n., Czechoslovakia. 2715
- Herbicides**. 9132
 - algal control in cooling systems. 3783
 - algicides. 6732
 - algicides, organo-tin compounds. 6734
 - amitrol effects on protein biosynthesis, Poteriochromonas stipitata. 6744
 - aquatic weeds. 4797
 - benzyl-imidazoles. 6733
 - bioassays, Crustacea. 9081
 - chemical composition. 8271
 - chemical control. 7482
 - cyclic sulphates. 8409
 - effects, amitrol, Poteriochromonas stipitata. 6746
 - effects, Hubbard brook. 6614
 - Eichhornia crassipes. 3309
 - metabolism, Tapes philippinarum. 3480, 5591
 - Monuron, diuron, algae control, Netherlands. 3199
 - nitrile derivatives. 1744
 - PCP, metabolism, Tapes philippinarum. 5590
 - substituted naphthoquinones, algicide. 5624
 - weed control. 3561
 - weed control, Asia and Far East. 3560
 - weed control, Europe. 3562
 - weed control, Near East. 3559
 - weed control, United States. 3558
- Hermaea dendritica**, New England. 2755
- Hermaphrodites**,
 - Astacus leptodactylus. 4914
 - Echinarachnius parma. 754
 - Lucinoma borealis var. minor, France. 5020
 - Merluccius productus, Washington. 8151
 - Potamobius leptodactylus. 4914
 - protandric, Pandalus borealis. 2693

- sex reversal, Onigocia macrolepis. 8178
- Hermisenda crassicornis**, visual system, morphology. 4121
- Herpetocypridinae**, distribution, Canada. 6062
- Herpetocypris chevreuxi**. 7812
- Herpetocypris**, Portugal. 8606
- Herpetocypris mateusorum sp.n.** 8606
- Herring fishery**,
 - Baltic Sea. 5253
 - England. 5242
 - Finland waters. 5252
 - International Trawling Survey. 5243
 - Irish waters. 5254
 - Netherlands. 5247
 - Norwegian, North Sea and Skagerak. 5245
 - Poland, North Sea. 5244
 - Polish, Baltic. 5249
 - south-west Ireland. 5251
 - Swedish, North Sea, Skagerak and Kattegat. 5248
- Herviella**, initiating escape response in Anthopleura. 245
- Herviella africana sp.n.**, Tanzania. 7843
- Hesionides gohari**, spermatophore. 2611
- Hesperothys**. 7130
- Heterandria formosa**, feeding studies. 6464
- Heteraxinoides xanthophilis**. 5881
- Heterocarpus**. 8560
- Heterocarpus wood-masoni**, egg and prozoa. 4050
- Heterocentrotus**,
 - algal growth over spines. 3496
 - origin centric banding. 3497
- Heterochordaria**. 6781
- Heterococcus**. 8284
- Heterocope septentrionalis**. 8101
- Heterocotylodes pricei**. 5881
- Heterocypris incongruens**. 8606
- Heterocyst**, Cyanophyceae, influence of nitrogen on production. 1748
- Heterocythereis albomaculata**. 7812
- Heteroderma sargassi f. parvula**, Japan. 4706
- Heterodontus**, thrust of tail. 3598
- Heterodontus francisci**. 6721
 - intrinsic cardiac rate regulation. 8881
- Heterodontus portusjacksoni**,
 - blood system. 6364
 - use of gill slits as intake for respiratory water. 7257
 - venous return in trunk. 354
 - water flow through gills. 7256
- Heterodora rostochiensis**. 7691
- Heterogeneity**, of G6PD. 5610
- Heteromeyenia**. 4826
- Heteromysis gomezi sp.n.**, sponge-dwelling, Caribbean Sea. 7770
- Heteromysis mariani sp.n.**, sponge-dwelling, Caribbean Sea. 7770
- Heterootula contraversa sp.n.** 3910
- Heterophryxus appendiculatus**, India. 4925
- Heteropneustes fossilis**. 8117
 - anatomy. 6465
 - castration and hypophysectomy effects-upon seminal vesicles. 5336
 - effect of oestrogen and cyproterone activity in castrate. 5338
 - effect of TSH and radiophosphorus, blood components. 7329
 - effect of varying photoperiod on ovary. 8142
 - effect on hormones, androgens and corticosteroids on seminal vesicles of castrates. 5337

- Heteropneustes fossilis*, contd.
 effect on ovary of increase in photoperiod. 8141
 host to *Orientocreadium batrachoides*. 134
 parasites, Iraq. 8117
 photoperiod of pituitary and ovary. 8143
 role of pituitary ACTH in calcium and phosphorus utilization. 7328
 seasonal reproductive activities in male. 4369
- Heteroptera**. 6621
 ecology, Iberian Peninsula. 3425
 ecology, Poland. 6081
 Międzychód, Sieraków. 6080
 Volga Delta. 1955
- Heterosigma inlandica*, Gokasho Bay, Shima Peninsula, Japan. 1797
- Heterosomata**,
 fishing industry, Baltic. 5460
 lactate dehydrogenase isozymes of 12 spp. 466
 new species, Japan. 7412
 tagging gun. 8050
- Heterotanaïs oerstedii*, ecology, Baltic Sea. 4921
- Heterothyone*. 8701
- Heterotis*, taxonomy. 5269
- Heterotrichida*. 3889
- Heteroxenia elisabethae*, electron microscopy. 3924
- Hexactinellida*. 6884, 7654
- Hexagenia**. 9086
 intermediate host of *Crepidostomum*, Mississippi. 5891
- Hexagenia limbata**,
 California. 4989
 distribution, California reservoir. 6082
 ecology, California reservoir. 6082
- Hexagenia naiads*, ecology, Oklahoma, reservoir. 2717
- Hexapanopeus angustifrons*. 5945
- Hexosemonophosphate shunt*, in early *Misgurnus* development. 878
- Hibinia emarginata*. 8553
- Hijikia fusiforme*. 3189
- Hildenbrandia sanjuanensis* sp.n. 6726
- Himantolophus*. 5221
- Himantura uarnak*. 7259
- Hindsiclava hertleini* sp.n., Galapagos Islands. 2756
- Hindsia*. 7874
- Hiodontidae*. 7275
- Hippocampus*, hormonal release of parturition. 9034
- Hippocampus kuda*. 5427
- Hippoglossoides elassodon*,
 larval skin. 459
 ultrastructure, skin. 4455
- Hippoglossoides platessoides*. 5187
 fishery studies. 460
 migrations, Newfoundland. 461
- Hippoglossus*, on-board handling. 5472
- Hippoglossus hippoglossus*, eggs and larvae, distribution. 1638
- Hippolysmata wurdemanni**,
 effect of *Probopyrus*. 6025
 parasitism by *Probopyrus*. 4047
- Hippolyte inermis**,
 feeding method and mouth parts of larva. 1249
 influence of temperature of larval development. 4048
 larval nutrition. 4930
- Hippolyte leptometrae* sp.n., Provence. 4049
- Hippolyte varians*, circadian colour-change rhythms 8581
- Hippospongia communis*, ultrastructure of intercellular communications. 6883
- Hirschmannia viridis*, ecology, brackish water. 2706
- Hirudinaria granulosa*, alkaline phosphatase and mucopolysaccharides in epididymis. 141
- Hirudinea**. 8117
 population control. 4871
 role in life cycle of fish blood parasites. 5944
- Hirudo medicinalis**,
 action of cholinergic antagonists. 3958
 significance of fluorescent neurones. 8528
 ultrastructure, nervous system. 3346
 ultrastructure of nephridium. 4874
- Hirundichthys affinis**,
 biometrics. 933
 fishery biology, Brazil. 932
 reproduction. 931
- Hislopia corderoi*. 5056
- Hispidopetra miniana*, gen.et sp.n. (Spongillidae). 3911
- Histamine**,
 effect on toad spinal cord. 2051
 in crab, goldfish and frog. 1905
- Histidine deaminase**, muscle and liver, *Scomber* *Pseudomonas*. 6521
- Histioneis bernhardi*. 7426
- Histioneis robusta* sp.n. 5489
- Histioneis speciosa*. 7426
- Histioteuthidae**, North Atlantic. 3484
- Histology**,
 accessory boring organ, *Polinices lewisi*. 236
 adrenal system, *Lampetra planeri*. 5199
 alimentary organs, *Ophicephalus marulius*. 7408
Belostoma indicum, digestive system. 1950
 calcified tissues, *Echinodermata*. 6168
 cellular inclusions, oogenesis, *Planaria*, *Dendrocoelum*, *Polycelis*. 6906
 cholinesterase, mesoderm, *Triturus cristatus*. 7197
Cupelopagis vorax. 6917
 cuticle of *Glossiphonia complanata*. 1872
 cyst wall, *Nanophyetus salmincola*. 8505
 cytochemistry, Schwann cells, lobster. 6020
 dehydrogenase localization, muscle fibres, fin, dogfish. 7262
 digestive organs, *Rhynchobdella aculeata*. 6586
 discoloured crab meat. 8564
 excretory organs, *Quadrula nodulata*. 7873
Exocoetidae, retina. 4449
 eyestalks, *Stomatopoda*, larvae. 7780
Fucus vesiculosus. 1066
 gonads, *Istiophoridae*, Indian Ocean. 3660
 gonads, *Thunnus atlanticus*. 919
 histochemistry, *Bufo stomaticus*. 6222
 histochemistry, cytosomal lipids in neurons, *Anodonta cygnea*. 7069
 histochemistry, deutoplasmic inclusions, *Dugesia* spp. 4857
 histochemistry, follicles of Langerhans, larvae, *Lampetra planeri*. 6358
 histochemistry of digestive tract proteins, *Pimelodus maculatus*. 8966
 histochemistry of neurosecretory system, *Chirocephalus diaphanus*. 8541
 histochemistry of polysaccharides, alimentary tract, *Pimelodus maculatus*. 8965
 histochemistry, oviduct and egg-jelly layers, *Rana pipiens*. 8770
 histochemistry, preoptic recess organ, vertebrates. 7150
 histochemistry, *Stellantchasmus falcatus*. 6910
 histochemistry, tunic, blood cells, *Halocynthia*

Histology, contd.

- aurantium. 8729
- histogenesis, intestinal epithelium, *Alytes obstetricans*. 3529
- histogenesis, *Xenopus* larval lymphoid organs. 776
- histophysiology, renal cells, *Gastropoda*. 8640
- hydrochloric acid, gastric tubules, *Teleostei*. 7354
- hypophyseal target organs, *Leucopsarion petersi*. 8175
- iron salts in ichthyopathology. 8943
- liver, *Ambystoma tigrinum*. 5076
- lymphomyeloid organs, *Amphibia*. 7946
- median nucleus, *Anura*. 5097
- neurosecretory preoptical neurohypophysis, *Cypriniformes*. 8931
- oesophagus and stomach, *Cetacea*. 3550
- oesophagus, *Teleostei*, *India*. 7343
- pancreas, *Petromyzon marinus*. 8066
- pharynx, hepatic caecum, *Branchiostoma*. 3501
- regeneration, *Amphibia*. 6272
- reproductive cycle, *Spisula sachalinensis*. 7895, 7896
- reproductive organs, *Spisula sachalinensis*. 7896
- skin allograft rejection, *Rana catesbeiana* larva. 6258
- Solanderiidae*, New Zealand. 3334
- structure of interrenal and water and electrolyte metabolism, eel. 8195
- swimbladder, *Macrognathus aculeatus*. 7402
- tentacle, *Patella vulgata*. 7050
- testes, *Tilapia nigra*. 9005
- ultimobranchial body, *Salmo salar*. 6433
- Historical accounts,**
 - fish and fisheries investigation, Freshwater Biological Association. 5184
 - fishing industry, Lake Erie. 5186
 - pre-Linnaean history of *Utricularia*. 1134
- Histiophoca**, skull anatomy. 7217
- Holacanthus venustus**, sp. n., Japan. 6499
- Holland**, *Chaoborus crystallinus* life history. 3421
- Holocene**, *Mollusca*, Gulf of Omega. 1971
- Holocentridae**. 7663
- Holcephali**, microchromosomes. 6363
- Holoporella**. 3314
- Holostei**, microchromosomes. 6363
- Holothuria**,
 - fishing industry, Ceylon. 8718
 - muscle proteins, *Mytilus*. 5024
 - parasitism by *Cyclopoida*. 5966
 - parasitism by *Diogenella*, West Indies. 7728
 - parasitism by *Scambicornus brachysetosus* sp. n. 4011
- Holothuria aff. fuscopunctata**. 5966
- Holothuria leucospilota**,
 - Coeloplana*, Japan. 4840
 - distribution and seasonal variation, toxins. 8719
 - gonadal pigment. 2826
 - toxins. 2827
- Holothuridae**,
 - commensal with *Gigantactis macronema*. 274
 - resources of India. 276
- Holothurinogenins**, new types, correlated with lanosterol. 752
- Holothuroidea**,
 - Chile. 751
 - New Zealand. 8701
- Homarus**. 4915, 7749
- bibliography. 7771
- Homarus americanus**. 6702
- bactericidal system. 1915
- bioassays, yellow phosphorus. 4555
- biosynthesis of phospholipids. 1913
- changes in serum protein during moult and reproduction. 690
- effect of *Gaffkya homari*. 691
- effect of seawater temp on abundance. 190
- influence of temperature on gaffkemia. 1252
- intersegmented reflexes of swimmeret. 1250
- microbiological study, British Columbia. 6024
- pentose phosphate cycle enzymes. 2062
- population estimates. 6023
- precipitin-like reaction of haemolymph. 192
- reflex dynamics of swimmeret. 1251
- requirements, aquarium. 6702
- stomatogastric nervous system. 6972
- tag retention showing behaviour and migration. 6022
- tagging. 7772
- variations. 1914
- Homarus gammarus**. 6704
- ecophysiology on eggs and embryos. 6021
- formation of shell feeding-fragments. 189
- innervation of receptors. 7773
- receptor hair. 7774
- tagging. 8582
- Homarus vulgaris**. 7466
- conformational changes, ATP:arginine phosphotransferase. 8583
- enzymes, sequencing. 4931
- monoamines in stomatogastric ganglion. 3399
- reactive lysine residue in dehydrogenase. 6973
- Homeostasis**, living organisms. 7478
- Homing**, see **Behaviour**.
- Homogentisic acid**, biosynthesis in algae. 5711
- Homology**,
 - nassellarian skeleton. 6855
 - skull, *Rhipidistia*. 3037
- Homosclerophorida**. 6884
- Hong Kong**, *Hamopontonia corallicola* (*Pontoniinae*) gen. et sp. n. 3396
- Hoplites**, osteology. 5335
- Hoplostethus**. 5221
- Hopperia** gen. n., (*Nematoda*). 3951
- Horatia**. 7845
- Hordeum**. 5523
- Hormatonema paulocellulare**, boring patterns. 2492
- Hormogonophycidae**. 8290
- Hormones**. 7757
- ACTH, calcium and phosphorus utilization, *Heteropneustes fossilis*. 7328
- adrenalin. 7962
- adrenalin, effects of thyroid extract treatment, *Rana ridibunda*. 8769
- adrenalin synthesis, heart, *Petromyzon marinus*. 7255
- androgens, *Rana pipiens*. 7171
- antidiuretic, bladder, *Rana esculenta*. 8765
- brain, *Rana ridibunda*. 7990
- calcitonin amino acid composition in salmon. 368
- cellular ACTH, *Cyprinidae*. 8934
- control of reproduction and oviducal activity, *Rana cyanophlyctis*. 316
- diabetogenic eyestalk, *Orconectes limosus*. 2705
- effect of early and midday prolactin injection on lipid content, *Fundulus kansae*. 9031
- effects of methallibure on ovulation induced by pituitary extract in vitro in frogs. 318
- effects of methyl testosterone on ovary, *Poecilia*

Hormones, contd.

- reticulata. 5467
- effects of plant growth, *Procambarus clarkii*. 4967
- effects of salinity on hormone secreting regions of pituitary, *Mugil*. 9036
- effects of salmon gonadotrophin on guppy ovary and sexual behaviour. 467
- effects on Ca metabolism in Crustacea. 2657
- effects on growth of *Chaetoceros*. 3806
- effects on seminal vesicles, castrate *Heteropneustes fossilis*. 5337
- effects on survival, *Gasterosteus aculeatus*. 5449
- endocrine control of reproduction, teleosts. 2953
- gastrointestine, *Chimaera monstrosa*. 4294
- gonadotrophins, effect on toad kidney. 2871
- hormonal relationships, algae. 13
- hypothalamo-hypophyseal system of *Phoxinus phoxinus*. 418
- IAA, effect on *Ulva lactuca*. 7526
- induction of capacitance changes in skin, frog. 7176
- induction of spawning, *Centropomus striatus melanus*. 7351
- inhibitor effects on blood sugar regulation Langerhans, ammocoete, *Lampetra*. 6360
- interaction of cells, thyroid and gonadotropic, *Poecilia*. 9040
- interrelation, *Squalus acanthias*. 8075
- melanocyte-stimulating, *Squalus acanthias*. 8074
- metabolic, *Biomphalaria sudanica*. 7031
- moulting hormone, *Carcinus maenas*. 6009
- moulting hormone, *Orconectes limosus*. 6977
- MSH, effect on melanophores of frog. 2074
- neurohormone D, *Periplaneta* effect of visceral ganglion, *Lymnaea stagnalis*. 7047
- neurohypophysial function in Amphibia. 2071
- oestrogen, *Heteropneustes fossilis*. 5338
- oestrogen in plasma, *Rana esculenta*. 8765
- oestrogen interconversions, *Dendroaster excentricus*. 6176
- Orconectes virilis*. 7790
- oxytocin, *Hydrolagus coliei*. 5212
- Periplaneta* neurohormone D, effect on visceral ganglion, *Lymnaea stagnalis*. 8659
- phytoecdysones, *Sesarma*. 6992
- pineal organ endocrinology, Amphibia. 8741
- pituitary-adrenocortical feedback mechanism, *Anguilla rostrata*. 6547
- prolactin, effect on tadpole growth. 5140
- prolactin, effect on tadpole tail fin, collagen synthesis. 8803
- prolactin effect, Teleostei. 6377
- prolactin, osmoregulation, *Gasterosteus aculeatus*. 3691
- prolactin, pituitary gland, *Triturus carnifex*. 6274
- prolactin release control, colour change, *Gillichthys mirabilis*. 6498
- prolactin, thyroxine-induced metamorphosis, *Rana catesbeiana*. 7980
- release at parturition, *Hippocampus*. 9034
- reproduction, Decapoda. 6957
- steroids in defensive secretion of *Cybister limbatus*. 2713
- stimulating amino acid incorporation by *Rana catesbeiana* muscles. 2058
- stimulatory effect of prolactin on collagen synthesis, tadpole tail fin. 7195
- synthesis of dl-sirenin from *Allomyces*. 597-599
- Teleostei. 8888

- testosterone, effect on hyphophysectomized *Poecilia*. 1634
- testosterone, in testes of *Tilapia leucosticta*. 2303
- thyrocalcitonin studies in elasmobranchs. 358
- thyroid effects, adrenalin action, *Rana ridibunda*. 8769
- thyroid stimulating, *Heteropneustes fossilis*. 7329
- thyroxine, analogues, metamorphic action, *Rana pipiens*. 6255
- thyroxine inhibition, *Rana pipiens*. 6257
- thyroxine, *Rana pipiens*. 4240
- thyroxine, thiourea, effects on liver, tadpoles. 8742
- time course effects, sex, frog. 7191
- tissue-producing, in urodeles. 324
- ultrastructure, melanophores, Amphibia. 4247
- use of trichloroacetic acid for extraction, *Catla*, *Labeo*, *Cirrhina*. 6450
- Hormophysa triquetra**, morphology, development. 8375
- Hot spring community**, recovery. 1752
- Hot springs**,
 - algae and insects, New Zealand. 2386
 - Cyanophyceae, thermophilic. 8294
 - Diatomaceae, *Badrinath*. 5652
 - fauna, *Tiberias*. 3317
- 5HTP-decarboxylase activity**,
 - nervous system, *Anodonta cygnea*. 7063
 - Upogebia littoralis*. 6055
- Humic acids**,
 - and derivatives as media for Actinomycetes. 3859
 - formation in Phaeophyceae. 3257
- Hungary**,
 - caves, *Arrhopalites hungaricus intermedius* and *Arrhopalites aggtelekensis buekkensis* subspp. n. 2709
 - Great Plains, mollusc ecology. 2754
 - Lake Balaton, *Monhystera andrassyi* sp. n. 2599
 - Meteor grotto, fauna. 3105
 - Plecoptera. 2725
 - River Danube, Chironomidae. 2707
- Hutchinsoniella macracantha**, Brazil. 7811
- Hyadesia fusca**, population dynamics, salinity tolerance. 7835
- Hyaena hyena**. 7692
- Hyaella azteca**,
 - feeding and food conversion. 6974
 - feeding behaviour. 6026
- Hyalinella**. 5056
- Hyalinoecia**,
 - taxonomy. 5938
 - taxonomy, North America. 6927
- Hyalinoecia artifex**. 6927
- Hyalinoecia tubicola**. 6927
- Hyalogonium**. 5718
- Hyaloraphidium contortum**. 7425
- Hyanassa obsoleta**, oogenesis. 2757
- Hybopsis**, lateral-line system. 3644
- Hybopsis plumbea**. 3642
- Hybrids**. 3642
 - Acipenser ruthenus* x *Acipenser colchicus*. 5429
 - Batrachium*. 4792
 - Brachionus urceolaris* x *quadridentatus*. 649
 - Bufo americanus* x *Rana pipiens*. 6215
 - Carassius*, *Cyprinus*, brain patterns. 4364
 - Centrarchidae. 8159
 - Chionoecetes* spp, Japan. 4918
 - chromatographic analysis, *Salmo salar* x *trutta*. 8109
 - Cyprinidae, Cobitidae. 5313

Hybrids, contd.

- cyprinids, Little Patuxent River, Md. 416
 degree of genetic compatibility, *Bufo* spp. 5077
Fundulus. 6559
Fundulus spp, chromosome morphology. 8206
Gasterosteus. 5450
 haemoglobins, Salmonidae. 8922
Halicarcinus. 2647
Hypophthalmichthys molitrix x *Ctenopharyngodon idella*. 8144
Jaera albifrons. 3401
Jaera albifrons prae-hirsuta. 1918
 karyology, *Hyla*, Australia. 6228
Larus spp, Iceland. 8824
 natural, *Bufo arenarum*, *Bufo spinulosus*. 6218
Petromyzon marinus, American Great Lakes. 5202
 platyfish-swordtail, amelanotic melanomas. 8157
Platyopocilus maculatus x *Xiphophorus helleri*. 4467
Poeciliopsis. 2330
Polysiphonia boldii x *Polysiphonia denudata*. 6790
 pseudogamy in *Dugesia benazzii* and *Dugesia lugubris*. 127
 RNA polymerase activity during embryology, *Amphibia*. 8735
Salmo. 8893
Salvelinus. 5303
 serology, Echinodermata. 7913
 serology, *Tripteneustes*, *Strongylocentrotus*. 7913
Tilapia, aquaculture. 3673
Tilapia nilotica x *mossambica*. 2298
Xiphophorus x *Platyopocilus*, growth and amino acids. 3051
- Hydra**. 5873
 culture on *Artemia* cysts. 5870
 differentiation of neurosensory cells. 3927
 electrical properties of body wall. 1854
 for testing azoester. 1167
 mesoglea, fibre system of changes in morphogenesis. 5871
 neoplasms and related disorders. 3925, 3926
 occurrence and function of carotenoids. 8470
 polarity. 8471
 polarity and polarity reversal. 3925
- Hydra attenuata**, nematocyte differentiation. 1166
Hydra carnea, spectral sensitivity. 4844
Hydra graysoni sp. n., *Hydramoeba hydroxena* of. 3928
Hydra littoralis, nuclear maturation during spermiogenesis. 639
Hydra pirardi annuli, role of inductive factors in interstitial cell development. 5872
- Hydra viridis**,
 maltose excretion by symbiotic algae. 637
 supernumerary heads. 3926
 ultrastructure and zymogen cells. 122
- Hydra vulgaris**,
 effects of antimetabolites and morphostatic substances on regeneration. 121
 growth stimulation and inhibition by X-rays. 6893
- Hydracarina**. 6621
 Colorado. 2732
 new species, India. 6092
 phototaxis. 1211
- Hydrachnellae**. 5529
 Africa. 7018
 drift activity. 715
 occurrence of Suctorina. 6837
 periodicity in drift activity. 6090
- Hydractinia echinata**,
 determination of sexual polyps, biological and chemical analysis. 6894
 morphogenetics. 7669, 7670
- Hydraenidae**, Romania. 1956
- Hydramoeba hydroxena**, on *Hydra graysoni*. 3928
- Hydraulics**, *Ascidia*. 760
- Hydrilla verticillata**. 3309, 7314
- Hydrobiinae**, distribution, caves, Switzerland. 7845
- Hydrobiology**,
 alpine glacier outlets. 3115
 Belgian brackish waters. 491-493
 Ille-et-Vilaine. 4508
 marginal caves. 5543
 Russian term. 7479
 Volta Basin. 7437
 Zanoaga lake, Romania. 2393
- Hydrocarbon distribution**, of algae and bacteria. 2548
- Hydrochemistry**, sanitary importance. 2419
- Hydrocynus forskali**, feeding habits, Lake Albert. 5317
- Hydrodynamics**,
Carassius auratus. 8944
 ctenoid apparatus, *Pisces*. 7268
 vortex formation, fishes. 7267
- Hydrogen**,
 evolution, *Chlamydomonas moewusii*. 4649
 evolution, *Chlorophyta*. 4647
 evolution, light-dependent, *Scenedesmus*. 1782
 photoproduction, *Scenedesmus*. 5728
 utilization of molecular hydrogen, *Chloropseudomonas*. 6811
- Hydrogen sulphide**, oxidation, meromictic lakes. 3114
- Hydrography**,
 Bornholm Basin. 5373
 control of meiobenthos, Bermuda. 6633
 lake Nordlaguna. 5534
 plankton, Bermuda. 471
- Hydroidea**, Black Sea. 1843
- Hydroides**. 3975
- Hydroides brachyacantha**. 3975
- Hydroides crucigera**. 3975
- Hydroides dianthus**, maturation. 8529
- Hydroides gairacensis**, Central and South America. 142
- Hydrolagus colliel**,
 alkoxy lipids and triglycerides. 5213
 reflectivity of skin. 5211
 oxytocin. 5212
- Hydrolagus mirabilis**. 5164
- Hydrology**,
 Glenan Archipelago. 4523
 hydrodynamic flow. 4591
 Rivers Rhine, Meuse and Scheldt. 5029
 south-east Atlantic. 3745
- Hydrolytic enzymes**, in digestive cells of molluscs. 259
- Hydromantes**,
 distribution and evolution. 4990
 distribution, Appennines. 6226
- Hydromantes genel**, Appennines. 6226
- Hydromantes italicus**, Appennines. 6226
- Hydromedusae**,
 epithelial conduction. 1855
 reproduction, budding. 3328
- Hydrophis melanocephalus**, oral sensory papillae. 783
- Hydrophis ornatus**, oral sensory papillae. 783
- Hydropsyche**. 9086
- Hydropsyche instabilis**, net-spinning. 2718
- Hydrostatic pressure**,
 and role of supra-oesophageal ganglion in *Nephtys*. 655

- Hydrostatic pressure, contd.**
 effect on invertebrates and teleosts. 513
 effect on Spirostomum activity. 625
- Hydrostatics**, Euthynnus affinis. 4438
- α -Hydroxycorticosterone**, stimulating Na transport in toad bladder. 809
- Hydroxylamine**, as nitrogen source for Candida spp. 2558
- Hydroxymethanesulphonate**, effect on photosynthesis in Chlorella pyrenoidosa. 3824
- Hydrozoa**. 9058
 fossils of the Sandling, Austrian Alps. 630
- Hyella caespitosa**, boring patterns. 2492
- Hygiene**. 6681, 7567
 bacteriological standards for fish and fishery products. 8871
 cholera in Kedah River. 8405
 control of drinking water. 6802
 control of microorganisms using tandem polyhalide resin. 9131
 danger of poisoning from shellfish. 7058
 detection of Clostridium botulinum and toxin, smoked fish. 8895
 drinking water standards, Canada. 9082
 enteritis-coli, Saale. 7571
 health risk of drinking mineral-contaminated water. 8250
 irradiation of food. 8412
 North Sardinia, industrial and sewage pollution. 9095
 occurrence of aromatic hydrocarbons, coastal waters. 8251
 polluted sea waters. 4553
 pollution, North Sardinia. 9095
 quantitative estimates, Salmonella in sewage and polluted seawater. 9092
 Salmonella, Gulf of Aarhus. 6683
 sanitary operation of fish processing plants. 8043
 sea water, mussel cultivation sites. 3459
 stream pollution, Streptococcus. 5567
 survival of human pathogens in sewage. 3753
 survival of poliovirus in sea-water. 8422
 Vibrio distribution, in Crassostrea gigas, Washington. 7573
 Vibrio parahaemolyticus in processed Chesapeake Bay blue crab. 7576
 Vibrio parahaemolyticus, shell fish, Netherlands. 7577
 virus survival in frozen oysters. 7591
- Hygophum machrochir**. 5442
- Hyla**. 7623, 8732
- Hyla arborea**. 6227, 7152, 7157, 7946.
- Hyla aurantiaca**, taxonomy. 3521
- Hyla caerulea**, hybrids, Australia. 6228
- Hyla crepitans**, anti-gastrin immunofluorescence, ectoderm. 3508
- Hyla lascinia sp. n.**, distribution, Venezuela. 5089
- Hyla meridionalis**, chorusing behaviour. 7161
- Hyla phyllochroa**, hybrids, Australia. 6228
- Hyla regilla**, parasitism by Glyptelminis hylareus. 5902
- Hyla versicolor versicolor**, from South-Central-Michigan. 299
- Hyllidae**, Neotropical. 5069
- Hymeniacidon perleve**, growth reproduction, Hampshire. 8463
- Hymeniacidon sanguinea**, microflora, Lago di Faro. 4831
- Hymeniacidon spherodigitata sp. n.**, New Zealand. 4824
- Hymenocera picta**, feeding behaviour on starfish. 6027
- Hymenolepis albertensis sp. n.** 8579
- Hymenolepis microstoma**. 8503
- Hymenomonas**, photosynthesis. 4617
- Hymenomonas carterae**. 4620
 ultrastructure, scale and coccolith production. 4626
- Hymenomonas MP 156**, deposition of minerals. 2566
- Hymenopenaeus robustus**, distribution, southeastern United States. 1916
- Hynobius retardatus**. 7160
- Hyodrilus hammoniensis**. 9069
- Hyptelium nigricans**, parasitism by Pseudomurray-trema, Illinois. 5879
- Hyperodon**. 6318
- Hyperoglyphe perciformis**, distribution, Atlantic Ocean. 8173
- Hyperolius madagascariensis**. 3509
- Hyperoodontini**. 6318
- Hyperostosis**, Drepane punctata, India. 4406
- Hyperprosopon anale**, distribution, Oregon. 3659
- Hyperprosopon argenteum**. 5389
- Hyperprosopon ellipticum**. 5389
- Hyphomicrobium indicum sp. n.**, Indian Ocean. 71
- Hyphomycetes**,
 Florida. 7582
 Wisconsin. 7581
- Hypophorus**, taxonomy of new species. 1957
- Hypnea**. 6714
 cytokinins as endogenous growth regulators. 56
- Hypocamptus**, 3 new forms. 157
- Hypogeophis rostratus**, cardio-vascular system. 2854
- Hypomesus**. 5188
- Hypomesus olidus**, analysis of fatty acids. 3609
- Hypomesus pretiosus**, gene duplication. 5327
- Hypopachus**. 7946
- Hypothesis**, cell size, Diatomaceae. 5668
- Hypophthalmichthys**. 6376
 aquaculture, Russia and Far East. 3632
- Hypophthalmichthys molitrix**. 3566, 4370, 5340, 6478
 artificial host of Dactylogyrus lamellatus. 5893
 distribution, Danube, Czechoslovakia. 6466
 haematology. 871
 hybrid with Ctenopharyngodon idella. 8144
- Hypophthalmichthys nobilis**. 5339
 haematology. 871
- Hypophysectomy**, (see also Pituitary),
 effects on seminal vesicles of Heteropneustes fossilis. 5336
- Hypopomus**, cutaneous receptor organs, ampullary and tuberosus organs. 4371
- Hypsibius (Isohypsibius) stenostomus**, northward extension of range. 716
- Hypsidoris farsonensis sp. n.**, Eocene, Wyoming. 7330
- Hysiptycha**. 7130
- Hypsoblennius gentilis**, wounds providing entry for lymphocystis infection. 895
- Hypsoblennius gilberti**, temperature sensitivity. 4404
- Hypsoblennius jenkinsi**, wounds providing entry for lymphocystis infection. 895
- Hyriopsis schlegelii**, properties and function of respiratory chain. 8674
- Hysterolites vulvarius**. 7129

- IAA**, effect on algae. 2480
- Ice**, as a habitat. 486
- Iceland**,
aquatic fungi. 604, 1118
life cycle of *Acrosiphonia sonderi*. 3227
rotifers from Budir, Snaefellsness. 648
thecamoebae. 3316
- Ichthyocampus belcheri**, distribution, Laccadives. 4303
- Ichthyocampus carce**. 5427
- Ichthyology**,
comparison of sonic-scattering layers. 5557
Lake Glubokoye. 8859
population estimates, Cuba. 8857
revision, *Corydoras* spp., Surinam. 7312
streams, Portugal. 8860
study of populations by poisoning. 8036
- Ichthyomyzon**, *Petromyzon*, hybrids. 5202
- Ichthyomyzon fossor**, life history, Lake Superior. 7251
- Ichthyomyzon hubbsi**, oxygen consumption in ammonoetes. 8062
- Ichthyophthirius multifiliis**, in vitro culture. 3318
- Ichthyosporidium**, neoplasms and related disorders, lesions. 4412
- Ichthyos australis**, caught off Argentina. 887
- Icosiella hoogstraali** sp. n., parasite of *Rana macrodon*, Manila. 8517
- Ictaluridae**. 7449
differences between populations defined by blood group antigens and antibodies. 874
- Ictalurus**. 5182
caudal neurosecretory system development and seasonal variations. 7332
osmoregulation, erythrocytes. 3643
parasitized by *Nematobothrium texomensis* and *Gladaridacris confusus*. 2591
- Ictalurus catus**, effect of temperature on "naturally occurring" blood group agglutinins. 873
- Ictalurus nebulosus**. 5223
audition. 3002
effect of temperature on "naturally occurring" blood group agglutinins. 873
electroreceptors. 5342
neoplasms and related disorders. 4372
- Ictalurus punctatus**. 3564, 3565, 5228
blood pH. 6469
effect of temperature on digestion rate. 5341
essential amino acids. 7331
feeds. 875
growth and survival of fingerlings kept in ponds and troughs. 6467
haematological effects of apholate. 411
purines responsible for silvering. 813
- Ictiobus**,
feeding behaviour, Arizona. 6468
haematology. 4373
- Identification**, *Tilapia*, Zanzibar. 3678
- Idiacanthidae**. 7232
- Idiacanthus**. 5442
- Idotea**. 4584, 4936
- Idotea baltica**. 8286
- Idotea chelipes**. 8286
- Idotea metallica**, Norway. 8575
- Idoteidae**, distribution, Gulf of Marseilles. 4037
- Idus idus**. 4798
feeding. 412
- Ignotocoma sabellarum**, ultrastructure of cortical regions. 3887
- Iguana iguana**. 8087
- Ilea fascia**. 4588
- Ilisha**. 6371, 8083
- Ilisha africana**, life history. 5270
- Ilisha indica**, feeding on *Prionospio pinnata*. 4320
- Illumination**,
effect on Lemnaceae. 3871
measurements in seawater off S.E. Florida. 499
of photoreceptor membrane in *Balanus*. 672
- Illustrations**, of Lamarck's Unionidae. 2806
- Ilyocypris ambigua**, taxonomy. 3418
- Immergentia angulata**, distribution, Hawaiian Islands. 4195
- Immunochemistry**, of tadpole and frog haemoglobins. 2059
- Immunology**,
Anacystis nidulans. 6737
antibody formation, *Rana temporaria*. 7996
antigen, serum proteins, *Acipenser* spp. 8191
antigen structure of fish collagen. 7318
blood group A reactive substance, *Patella vulgata*. 8664
blood proteins, *Rana esculenta*. 5105
Chlamydomonas. 3231
Chlorophyta. 4635
circular dichroic study, antibodies, *Anguilla anguilla*. 8197
Clupea harengus. 3605
comparative, of sipunculid coelomic fluid. 1198
Crassostrea. 249
cross reactions of trypsin and chymotrypsins, *Astacus*. 6961
differences between elementary populations, *Engraulis encrasicolus*. 6394
differentiation, *Engraulis encrasicolus*, Black Sea, Sea of Azov. 6392
Engraulis mordax. 6393
fluorescent antibody technique, *Pseudomonas*. 5782
frog. 8797
genetics, *Thunniformes*. 8189
haemagglutinins to human erythrocytes, invertebrates. 8434
histamine formation, *Hafnia*. 4758
histocompatibility. 6718
histopathology, skin rejection, *Rana catesbeiana*. 6258
host specificity and rejection, *Schistocephalus solidus*. 8513
hybrids, *Echinodermata*. 7913
immunochemistry of phosphagen kinases. 5609
immunochemistry, *Porifera* cell surface. 4827
immunoglobulins, *Xenopus laevis*. 8788
inheritance of resistance to thymus histone, *Amoeba*. 7630
IPN virus, *Trichogaster trichopterus*. 3035
leptospiral agglutinating factor, *Clemmys caspica*. 8809
morphogenesis of digestive system, *Bufo melano-*

Immunology, contd.

- stictus. 6219
- of *Anguilla japonica* to *Vibrio anguillarum*. 2315
- primary immune response, *Bufo marinus*. 6213
- Rana temporaria*. 7997
- sipunculid coelomic fluid. 2040
- temperature effects, *Cyprinus carpio*. 2997, 2998
- transplant between *Anura* and *Urodela*. 7145
- transplantation immunity, *Ambystoma mexicanum*. 6206
- transplantation immunity, *Helisoma duryi*. 8656
- transplantation immunity, *Helisoma duryi normale* histoincompatibility. 6112
- trypsin and protease from decapods. 1233
- Improvement of habitats**, fertilization, ecological changes, Crecy Lake. 4509
- Index fossils**, Pleistocene, *Gephyrocapsa*. 3808
- India**,
 - Acetabularia* from Andhra Pradesh. 546
 - algae from Madras area. 22
 - Alleppey, primary productivity studies in the shelf waters. 3721
 - Anaporrhutum stunkardi* sp.n. from *Scoliodon dumerilli*. 1856
 - Andhra coast, *Gastrotricha*. 3953
 - Askenasyella randhawai*, sp.n., from Madras. 549
 - Bay of Bengal, *Asterionella japonica* bloom. 1655
 - Bucephalopsis* spp.n., parasites of freshwater fishes. 3335
 - Calcutta, bacteria in water supplies, chlorination effects. 1700
 - Calcutta, *Vibrio cholerae*. 2557
 - Characeae compared with those of south eastern US. 551
 - Cochin Harbour, *Arcartia bilobata* sp.n. 3355
 - Coleochaete* from Gujarat. 564
 - Cyanophyceae of Mount Abu. 523
 - Dakar, ascidians. 2843
 - desmids from Kashmir. 538
 - distribution of algae in the River Moosi. 516
 - Dugesia indica* sp.n. 3943
 - Gagata sexualis* sp.n. 3000
 - Godavari River, *Macrobrachium malcolmsonii*. 2652
 - Kashmir valley, *Brachinecta acanthopenes* sp.n. 3352
 - laminaran from *Phaeophyceae*. 1064
 - Madras State, Nilgris, limnology of 2 upland impoundments. 964
 - 3 new forms of *Oedogonium* from Andhra Pradesh. 568
 - new records of inter-tidal cirripedes. 174
 - Oedogoniaceae from Tungar Hill. 567
 - prawn resources. 2671
 - Ramgarh Lake, limnology. 3112
 - River Moosi, algal periodicity. 3113
 - Tardigrada*. 2733
 - thermal Cyanophyceae. 524
 - Vaucheria longicaulis* from Okha, Gujarat. 545
 - Vellar Estuary, Molybdenum. 3117
 - Zygnemataceae* from Panjab. 577
- Indian Ocean**,
 - Bay of Bengal, *Gonyaulax pacifica*. 3851
 - Cladangia exusta*. 3920
 - Dendrophyllia indica* sp.n. 3922
 - fisheries, *Thunnus albacares*. 2306
 - Gulf of Mannar, *Montipora manauliensis* sp.n. 3929
 - Istiophoridae, Gonad development. 3660
 - parasitic copepods. 3353

Poritidae spp.n. 3923

- Indicators**, clamshell composition, paleohydrology. 4135
- Indicator species**,
 - ciliates. 5826
 - diatoms in estuaries. 1659
 - of purification, diatoms. 4545
 - Penilia virostris*, Mediterranean. 5537
- Indo-Pacific**,
 - Philippia* ecology. 3449
 - Sargassum-dwelling molluscs. 2773
- Indo-China**, diatoms. 3213
- Indocucullamus longispiculum*, described from *Sciaena diacanthus*. 132
- Indonesia**, Bagridae. 394
- Indopacetus**. 6318
- Indostomus paradoxus*, anatomy and taxonomy. 6563
- Industrial wastes**,
 - biodegradability. 4548
 - biodegradability of nylon waste. 4549
 - determination of organic carbon. 6655
 - molasses distillery, loading parameters. 4547
 - monitoring milk plant waste. 6656
- Information handling**, aggressive communication, *Gonodactylus bredini*. 8580
- Infrared radiation**, *Gyrodinium dorsum*. 7557
- Infusoria**. 7434
 - distribution of in White Sea. 5539
 - Sevastopol Bay, plankton. 4494
- Inheritance**,
 - determinations. 7562
 - uniparental, in *Chlamydomonas reinhardtii*. 37
- Inhibition**, retina in darkness, frog. 6250
- Inhibitors**,
 - acetazolamide, transport mechanisms across bladder, turtle. 5148
 - ACh, heart, *Crassostrea*, *Mytilus*. 7881
 - AChase, squid. 7902
 - actinomycin D, embryology, *Paracentrotus lividus*. 7920
 - allylglycine, Mauthner cells, *Carassius auratus*. 7306
 - angiotensin on heart rate, turtle. 6292
 - antimitotic agents, effect of colchicine and Colcemid on *Tetrahymena*. 1157
 - arginine vasotocin, *Protopterus aethiopicus*. 8214
 - autoinhibitor, *Platydorina caudata*. 4678
 - bacterial cell wall synthesis, *Anabaena variabilis*. 8299
 - C^{14} metabolism, *Chlorella pyrenoidosa*. 6762
 - caffeine. 6241
 - cleavage, *Hemicentrotus pulcherrimus*, eggs. 7916
 - colchicine effect on spermatogenesis, *Nitella*. 8357
 - colchicine, effect on *Stentor*. 626
 - colchicine, effect on *Tetrahymena pyriformis*. 3899, 8453
 - colchicine, inhibiting cilia regeneration in *Tetrahymena*. 1161
 - copper, mitosis, *Chlorella*. 6755
 - cycloheximide, *Euglena gracilis*. 6799
 - Cyclotella cryptica*. 5667
 - cystic fibrosis patients plasma, of motility of gill cilia. 6138
 - DDT, reflex, *Salvelinus fontinalis*. 8112
 - dipyridyl diquat, metabolism, *Chlorella vulgaris*. 6763
 - effect on sarcoplasmic reticulum, frog. 5120
 - fouling of conduits by marine organisms. 6707
 - fungi and bacteria, skin gland secretion, *Salamandra*

Inhibitors, contd.

- maculosa. 6267
 GABA, lobster nervous system. 8566
 growth, *Brachydanio rerio*, *Trichogaster trichopterus*. 8129
 growth, microbial. 6801
 growth, *Panagrellus*. 4863
 growth, peroxyacetyl nitrate, *Chlamydomonas reinhardtii*. 7510
 growth, *Poecilia reticulata*. 6583
 growth, xylulose, *Chlorococcum echinoyzotium*. 4666
 influence of sodium chloride on *Desulfovibrio*. 4757
 interaction between motoneurons, frog. 6288
 ligands, effects on methaemoglobin, *Lampetra fluviatilis*. 7253
 metabolic, 2,4-DNP, isolated muscles, frog. 8792
 metabolic synthesis, *Asterionella Prorocentrum*. 6798
 methallibure, testes, *Poecilia reticulata*. 8213
 melanosome movements, *Rana pipiens*, *Anolis carolinensis*. 8773
 mitosis, amphibian kidney, *Xenopus*. 5137
 nicotine compounds, effect on adominis muscle, *Rana pipiens*. 7177
 nicotine, fertilization, *Arbacia punctulata*. 8708
 nicotinic acid, *Abramis*, *Lucioperca*, *Rana*. 7299
 nitrous acid on cleavage development, *Rana pipiens*. 8772
 nuclear migration, *Micrasterias*. 6768
 nucleic acid-synthesis, *Tetrahymena*. 6861
 papaverine, frog skeletal muscle. 6241
 phenol, neuromuscular junction, *Carassius auratus*. 8131
 phosphorylase activity, *Anodonta cygnea*. 7068
 phosphorylation uncouplers, *Chlorophyta*. 5693
 photoinhibition of growth, *Acanthamoeba castellanii*. 7629
 polyoxin D, *Neurospora crassa*. 5804
 protein synthesis, eggs, *Amphibia*. 8737
 respiratory, frond and flower production in *Lemna*. 6824
 sensitivity to metabolites, *Chlamydomonas*. 4648
 vestibular efferent system, cerebellum, frog. 7964
 visual, prey-catching behaviour, *Bufo bufo*. 6212
 X-irradiation, inhibitor of growth, *Campanularia flexuosa*. 5864
 X-rays, stimulation, *Hydra*. 6893
Inia geoffrensis, reproduction in captivity, America. 5158
Injuries, *Heteropneustes fossilis*. 6465
Inoceramus, taxonomy, Holarctic. 7883
Inorganic acids, treatment of nuclei in meristem of *Elodea*. 5812
Inorganic resource industry, pollution. 3758
Inozoa. 6870
Insecta,
 associated with *Spongilla*. 703
 communities in a small stream, Quebec. 216
 dispersal of algae, Protozoa and fungi. 4104
 ecology, stream environment. 6066
 light control of drift. 702
 new emergence trap for collecting stream spp. 215
 Potomac River. 3137
 respiratory significance of physical gill. 8607
 stream insecta drift nets. 1944
 water-filled tree holes. 2721
Insecticides. 6141, 8269, 8274
 Abate, defect on *Dracunculus*. 7726
 bioassays, Pisces. 7449
 chemical composition. 8270
 containing insect-pathogenic *Bacillus*. 713
 DDT. 7449, 8103
 DDT, accumulation, *Platichthys flesus*. 8212
 DDT, accumulation, *Solea solea*. 8216
 DDT, bioassays. 7450
 DDT, *Carassius auratus*. 6446
 DDT, decreased susceptibility, blackfly larvae, New York State, Canada. 7016
 DDT effects on tadpoles, *Rana temporaria*. 7455
 DDT for control of blackfly larvae. 8629
 DDT, reflex inhibition, *Salvelinus fontinalis*. 8112
 DDT toxicity, *Oncorhynchus kisutch*. 8100
 degradation. 3764
 determination in water. 8249
 Dylox, control of *Lernaea cyprinacea*. 3362
 extraction, lake waters. 6657
 floating larvicides. 7481
 Heptachlor, bioassay. 9078
 monitoring, British Isles. 7462
 residues, *Salmo salar*, Maine. 4342
 resistance, *Gambusia affinis*. 1697
 seasonal pollution, Grand River Ontario. 5565
 uptake of Malathion, *Cyprinus carpio*. 5332
Instar determination, mosquito larvae. 2712
Instruments, hydrodynamic depressor. 4563
Interface, mud-water, microgradients. 1685
Interrenal gland, *Salamandra*, ultrastructure. 324
Interstitial cells, ontogeny in *Pennaria*. 1168
Interstitial environment, *Microjanira dentifrons*, gen. et sp. n. (*Janiridae*), Bay of Naples. 7785
Interstitial fauna,
Heterocyclusina vietnamensis gen. et sp. n., China Sea. 4007
Philine exigua, Melanesia. 4130
Intertidal community, *Pisaster-Tegula* interaction. 4133
Intertidal environment,
Alcyonium pacificum, Akkeshi. 6891
Apsodes intermedius, Brazil. 5990
 ecology, *Scrobicularia plana*. 7091
 ecology, *Serranidae*, *Pseudochromidae*, *Apogonidae*, Japan. 6488
Eisenia bicyclis, Japan. 7531
 factors affecting distribution, *Eurydice* spp., British Isles. 6970
 feeding mechanisms of *Ophiuroidea*, New Zealand. 7119
 interstitial fauna, Andaman, Nicobar. 8439
Kelleria spp., Madagascar. 4898
 rock pools, maturation of *Corixidae*. 7824
 sandy-beach community, N. Carolina. 494
Intertidal zone, *Echinoidea*, Hatakeziama Island. 4177
Intestinal ATPase, *Carassius auratus*. 5328
Introduced animals,
 Campbell Island. 8020
Copelatus, *Suphisellus*, California. 6074
Crepidula fornicata, Japan. 7857
Oncorhynchus masou, Ontario. 7277
Inversion, *Volvox* ultrastructure. 1060
Invertebrates,
 anaesthetics. 5822
 cave fauna, Texas. 8433
 caves and mines, Morecambe Bay. 7615
 chemotropism and marine products. 5823
 comparative physiology of chromatophore. 8428
 continuous recording of buoyancy. 8080

Invertebrates, contd.

- creatine kinase. 8430
 - culture. 7474
 - freshwater. 8245
 - functional organization of ganglia. 8427
 - glycolipids. 7617
 - haemagglutinins, human erythrocytes. 8434
 - lactate and succinate oxidoreductases. 3315
 - Lake Baikal. 9074
 - laminarinases. 3876
 - marine, receptors. 1826
 - measurement of respiratory rate. 6700
 - mechanisms of hatching. 1827
 - neoplasms and related disorders. 3875
 - number of fossil species. 7613
 - phosphonolipid biosynthesis. 6096, 6097
 - phylogeny, neoplasia. 4569
 - polysaccharides, Japan Sea. 7618
 - proteinases. 7616
 - reproduction, Arctic. 9073
 - small reservoir. 3083
 - thermodynamic studies of flagellar movement of spermatozoa. 7610
 - vertical distribution, stream bed. 6611
 - zosterinase activity. 8431
- Iodine,**
- accumulation by nephridia of *Sipunculus*. 1199
 - enrichment by marine algae. 26
 - fate, neuraxis, *Rana pipiens* during metamorphosis. 7172
 - metabolism, *Nereis diversicolor*. 8533
 - nutrition of *Petalonia fascia*. 1072
 - requirement for algae grown in bacteria-free cultures. 1069
- Iodoamino acid,** thyroid, *Scarus guacamaia*. 5410
- Ions,**
- active transport and sodium fluxes at moult in *Gammarus*. 1246
 - ammonium currents in squid giant axon. 2028
 - cation absorption by algal materials. 1741
 - conductances of frog sartorius muscle fibres. 2079
 - effect of ions on *Paramecium* behaviour. 101
 - effect of lack of SO_4 on metamorphosis of *Ascidia malaca*. 284
 - effect of nickel, uranyl and calcium on the liberation of transmitter in neuromuscular junction of frog. 309
 - excretion of K by bladder of *Bufo marinus*. 298
 - inorganic, seasonal changes in *Rana esculenta* blood. 2060
 - ionic regulation, *Melosira varians*. 5678
 - ionic relations, *Artemia salina*. 1206, 1207
 - ionic relations, marine algae. 1737
 - K and Cl conductances in giant barnacle muscle fibres. 1897
 - K - Na exchange in *Platichthys flesus*. 940
 - minerals, in nutrition of Characeae. 550
 - permeability of frog skeletal muscle. 2083
 - salt and water balance in *Sudanonautes africanus africanus*. 1938
 - seasonal variation, muscles, *Rana*. 4230
 - stationary ionic permeabilities of sensory and motor fibres in the frog. 310
 - transport in stomach of metamorphosing bullfrog tadpole. 2085
 - transport of chloride in crab. 4942
- Iphinoë trispinosa**, life-history. 185
- Ipomaea batatas**. 7314
- Iran, fish farming in reservoirs and rivers. 3583
- Ircinia**. 6631
- Ireland**, report of Salmon Research Trust. 365
- Iris**, Rhein. 4785
- Irish Sea**, amphipods of shallow-water sand community. 676
- Iron**. 6594
- and growth, *Dunvella tertiolecta*. 3063
 - fortifying shark liver oil. 2941
 - in natural waters. 3167
 - metabolism, *Elliptio complanata*, Ottawa. 5018
 - role of bacteria in system, Krasnoje lake. 5785
 - salts in ichthyopathology. 8943
- Irradiation,**
- Carassius, 3H -thymidine incorporation. 2994
 - (cobalt-60 γ), inducing gynogenesis and androgenesis in fish. 815
 - effect of ^{60}Co on liver, *Heteropneustes fossilis*. 409
 - effect of, on formative processes of Porifera and Coelenterata. 114
 - effect of UV on origin of trichocysts in *Paramecium*. 622
 - effect of UV on RNA synthesis and cell division in amphibian lens. 323
 - effect on cellular dynamics, intestinal epithelium, *Oncorhynchus kisutch*. 6406
 - of fresh fish. 5372
 - of gammarids. 186
 - of Tinca embryos, resulting in reduction of radio-sensitivity. 881
 - properties of fluorescence of muscle, *Catostomus commersoni*. 402
 - radiosensitivity of Amphibia. 6223
 - survival of haploid and diploid *Chlamydomonas* exposed to radiations of different LET. 1042
 - UV-absorbing and UV-fluorescing substances in *Oncorhynchus*. 372
 - UV, alteration of situs of viscera at gastrula and neurula stages, *Ambystoma mexicanum*. 5075
 - UV, causing mutagenesis in *Anacystis*. 2490
 - UV reactivation of protozoa. 616
 - X-irradiation, *Campanularia flexuosa*. 5864
- Irrigation,**
- in *Phascolion strombi*. 2613
 - with waste treatment effluents. 1115
- Isactinia olivacea**, pigments. 3332
- Ischnochiton**. 6162
- Ischnochiton alatus**. 7105
- Ischnura elegans elegans**, biometrical analysis. 712
- Ishige sinicola comb.n.**, taxonomy. 4722
- Isochrysis**. 7087, 7488
- Isochrysis galbana**. 3720, 9088
- Isocypris**. 4975
- Isolation,**
- of algae. 3221
 - protozoa and algae from bacterial contaminants. 9105
 - Vibrio parahaemolyticus*, processed meat, crab meat, meat, Chesapeake Bay. 7576
- Isonychia spp.n.**, Amur River. 7823
- Isoperla goertzii**. 7015
- Isopoda**. 7739, 8439
- Cambourné's cave. 7744
 - distribution. 4072
 - distribution, North Sea. 6028
 - integumental pigments. 6959
 - new species from Portugal. 8552
 - parasitic, infestation of *Chanos chanos*. 3626
- Iso-propyl-n-phenyl carbamate**, causing reversible

- Iso-propyl-n-phenyl carbamate**, contd.
inhibition of cilia regeneration in *Stentor*. 626
- Isorchis parvus** gen. et sp. n., (Haploporidae), New Caledonia. 5880
- Isotopes**,
accumulation, *Lampsilis radiata*. 5019
accumulation of Plutonium, Polonium, Ascophyllum nodosum. 8372
caesium, *Artemia salina*. 3982
deuterium, effects in enzymatic transamination, *Scenedesmus obliquus*. 8368
distribution, Atlantic Ocean. 6629
distribution in Pacific salmon. 6693
¹³¹I, uptake by biota, Fern Lake, Washington. 4571
iodine, *Rana pipiens*. 7173
pollution, North Adriatic. 4552
strontium-90, pollution. 6694
thymidine, localization by autoradiography, macro-nucleus of *Paramecium aurelia*. 5849
use in measurement of primary production. 8228
use of radiocarbon in zooplankton production estimates. 5517
yttrium-91, effect of chelation on uptake and loss, *Porphyra*. 5750
- Israel**,
Gulf of Eilat, limnology of heliothermal solar lake. 3732
high altitude lakes. 3095
Lake Kinnereth in organic phosphorus. 2362
Lake Kinnereth, life cycle of *Peridinium cinctum*. 3289
Lake Kinnereth, phosphates. 3093
Lake Tiberias, algal distribution. 3221
Lake Tiberias, bibliography. 2462
Lake Tiberias, chemical limnology. 3094
Lake Tiberias, fauna of hot springs. 3317
Lake Tiberias, phytoplankton. 3060
Lake Tiberias, planktonic Protozoa. 2570
Lake Tiberias, vertical eddy diffusion. 3092
National Water system, reservoirs. 3731
- Istiophoridae**, gonad development, Indian Ocean. 3660
- Istiophorus**. 3660, 5395
- Italy**,
Entomostraca. 3979
Lake Maggiore, plankton. 3057
Lake Maggiore, zooplankton. 3068
Lake Orta, benthic ciliates. 2568
Nereidae. 3969
new *Echinogammarus*. 3390
new species of *Salicornia* from Lagoon of Venice. 82
north, Copepoda. 3997
seaweeds from Apulia and Sardinia. 29
Sile river, hygiene. 3140
Venice Lagoon, ecology of herpetofauna. 4213
- Itararella gracilis** gen. et sp. n., (Porifera), Carboniferous, Uruguay. 5855
- Ivory Coast**, Trematoda. 3944
- Ixa holthuisa** sp. n., northern Arabian Sea. 7775
- chromogranular polychromatism. 1253
ecology and biology in the Polish Baltic Sea. 1254
introgressive hybridization. 3401
morphology of stomach. 177
pigmentation. 1917
polychromatism. 3400, 7776
population studies. 4937
- Jaera albifrons albifrons**, hybridized with *Jaera (albifrons) prae-hirsuta*. 1918
- Jaera (albifrons) prae-hirsuta**, hybridized *Jaera albifrons albifrons*. 1918
- Jamaica**, Porifera. 3911
- Jania**, taxonomic value of reproductive organs. 4710
- Japan**,
Ago Bay, control of fouling organisms. 3478
Bagridae. 394
Barbatia (*Ustularca*) *aizoi* sp. n. and *Barbatia (Coraliarca) tamikoe* sp. n. 2005
benthic fauna of clam bed, Hachinohe coast. 497
Conus gloriamaris, Philippines. 1981
Cruoriella elegans, sp. n. 2544
Cruoriella fissurata, systematic anatomy. 3284
culture of *Penaeus japonicus*. 2676
desmids. 537
distribution of plankton. 472
Gnorimosphaeroma salebrosa sp. n. 3412
Hokkaido, Akkeshi, molluscan shells. 1968
Hokkaido, Ishikari Bay, fishery biology of shrimps. 1268
Hokkaido, marine harpacticoid. 1221
Hokkaido, Mysidacea and Euphausiacea. 3069
Ibaraki Prefecture, *Schimmelmanna plumosa*. 3283
Kamchatka Peninsula, *Clinopegma borealis* sp. n. 1980
Kinu-numa Swamps, freshwater algae. 3195
Kuroshio, chlorophyll maxima. 3712
Learchis distribution. 3456
limnology and fisheries of Lake Saroma in winter. 488
marine denitrifying bacteria. 70
Miyako and Yamada Bays, Foraminifera. 1829
Naticidae, taxonomy. 1991
Nebularia abbatis. 2015
Neptunea ennae sp. n. 1992
Oedogonium. 2525
Okinawa, freshwater algae. 3194
Okinawa, Gastropoda. 1974
Osaka Prefecture, *Micrasterias* of ponds. 3239
records of *Scenedesmus* in suburban ponds. 49
Rhizidium tomiyamanum sp. n. 3306
Rissoidea. 1979
seas, *Cypsilurus opisthopus*. 3688
seas, *Physalia*. 3932
Semisulcospira, ecology. 3453
Shima Peninsula, Gokasho Bay, *Heterosigma inlandica*. 1797
Shiretoko Peninsula, *Akkesiphycus lubricum*. 2532
Suruga Bay, Mochimune, algal flora. 1740
Tanabe Bay, *Malacanthus latovittatus*. 3704
Tritonia festiva from Japanese waters. 238
Tritoniopsis elegans. 3458
Tsugaru Peninsula, ecology of freshwater planaria. 1859
- Japan Sea**. 4532
fisheries of *Chionoecetes opilio*. 1240
marine algae. 2486
psammobiotic ciliates. 87

- Japonolaeops dentatus* gen. et sp. n. 7412
- Jasus*, similarity of larva to that of scyllarid. 1255
- Jasus lalandii*. 6981, 7751
- acclimatization in French Atlantic coast waters. 693
- ecology and reproduction, South Africa. 193
- fertilization. 4938
- moulting frequencies. 4939
- surface currents influence, Cape Agulhas. 4525
- Jasus tristani*. 6636
- Jaws, adaptation, Pleuronectiformes. 1630
- Jellyfish,
- freshwater records, Calif. 119
- strobilation. 1844
- sulphate regulation. 1846
- trophic significance. 1847
- Jenneria, revision of spp. 224
- Jocaste japonica*, host specificity and distribution. 1256
- Jocaste lucina*, host specificity and distribution. 1256
- Johnius. 6489
- Johnius dussumieri, maturation and spawning. 896
- Joyeuxiella gillhami sp. n., parasite of Zibethailurus serval, Tchad. 7682
- Jugoslavia, fresh water Amphipoda. 1900
- Juncus. 3869, 7596
- Juncus pelocarpus, parasitism by Chytridiaceae. 3305
- Jurassic, Hydrozoa of the northern limestone Alps. 630
- Justicia americana, production and biochemistry. 2361
- Justicia hayatai var. decumbens, piscicidal components. 5168
- Justitia, phyllosoma larvae, Pacific. 7777
- Justitia longimana, phyllosoma larvae, Atlantic. 3402
- Juveniles, Aplochiton. 822
- K**
- Kahliella acrobates, origin of primordial buccal cavity. 3888
- Kamaka kuthae. 6625
- Kapurdia bhargavaei gen. et sp. n., (Centropomidae), Tertiary, Rajasthan. 7359
- Kareius. 5188
- Karrerria, taxonomy. 5720
- Karyology, (see also Chromosomes).
- analysis of Notemigonus and Notropis. 879
- Chlorophyllum spp. 2510
- chromosome constitution. 8008
- chromosome constitution, Xiphophorus maculatus, British Honduras. 6590
- DNA content, chromosome structure, Amphibia. 6227
- Fundulus. 6559
- Fundulus spp hybrids. 8206
- Halichoerus grypus. 6305
- Hyla hybrids, Australia. 6228
- Physeter, Balaenoptera. 6314
- Pisces. 8852
- Podocnemis, Brazil. 6297
- Rhizocephala. 175
- Kassina senegalensis. 7946
- Kathala gen. n., for Corvina axillaris. 429
- Katsuwonus, blood pathways in gills. 4307
- Katsuwonus pelamis. 5171, 6539, 7377, 7381, 8189,
- courting behaviour, Hawaii. 7376
- digestion and food consumption. 451
- drying. 8190
- esterase polymorphism. 9013
- extraction of nucleic acids. 6574
- genetic distinction between Atlantic and Pacific forms. 915
- gill dimensions. 916
- parasitism by Raorhynchus terebra. 3954
- 6-PCD, α -GPD. 9012
- Kelleria spp., burros, Madagascar. 4898
- Kelletia. 7857
- Kelp, harvesting, hooks and grapnels. 2535
- Kentrosphaera borzi, reproduction. 6767
- Keratella quadrata. 4492
- ecology, Canada. 3715
- Keratosulphate, degrading enzymes, Charonia lampas. 7854
- Keys. 8552
- Acanthobothrium, North America Atlantic Coast. 5883
- Acestrorhynchini, South America. 5316
- Acrothoracica. 4016
- Actumnus, West Pacific. 8562
- Alima. 7746
- Ascidia, British Isles. 7936
- Capingentidae. 8500
- Centropagidae, Australian. 3995
- Ceramiaceae, Argentina. 4705
- Citharichthys spp., Western Atlantic. 7388
- Clupeiformes. 8083
- Clupeiformes, Malaya. 4311
- Corixidae, South America. 7002
- Cryptocerata, South America. 7003
- Cyprinion, West Pakistan. 5331
- Diatomaceae, Chile. 3807
- Diogenella. 7728
- Diplectanidae, Gulf of Lions. 3940
- Disconema spp, Gulf of Lions. 3952
- Dulichia. 3389
- Entocytherinae, Kentucky. 6063
- Ergasilus. 5969
- fauna, Trinidad. 7146
- Foraminiferidae. 4800
- freshwater fauna, Ceylon. 6621
- Galaxiidae, New Zealand. 8193
- Gambusia, Caribbean. 3690
- Glossiphoniidae. 6923
- Gonatopsis spp, Japan. 4169
- Hamodactylus. 4909
- Helobiae. 5807
- Hirudinea. 6923
- Holothuroidea, New Zealand. 8701
- invertebrate fauna, stony hill-stream. 5526
- larvae, Anax spp, India. 7828
- larvae, Eusimulium, Yemen. 8625
- Leanira. 8530
- Lobosa. 6840
- Myriophyllum, Asia. 4789
- Mysidella. 7743
- Nasitrema. 5906
- Notonectidae, Antilles. 7013
- Odonata, British West Indies. 4105
- Oithona. 7724
- Parabathynella spp. 8552
- Parapilumnus, West Pacific. 8562
- Parastacidae, Australia. 3391
- Phylladiorhynchus. 8557

Keys, contd.

- Pilargidae, Scotland. 3959
 Pilumnopeus, West Pacific. 8562
 Polychaeta, Argentine coast. 4867
 Polychaeta, Mexico. 8520
 Prayinae. 3935
 Protocryptochrysis gen. et sp. n. 7644
 Protozoa, caves, United States. 7620
 Rhodopeltis. 3282
 Salmonidae, scale characteristics for canned species. 6402

- Scorpaenidae, Atlantic. 5412
 Simuliidae, British Isles. 7821
 veliger larvae, Banyuls-sur-Mer. 4112
 Ziphini. 6318

Kidney,

- adrenal system, Lampetra planeri. 5199
 Carassius auratus. 5325
 effect of urinary bladder catheterization on function, Salmo gairdneri. 7285
 enzyme regulation, Rana hexadactyla. 3518
 enzymes, Amphibia. 7175
 esterase histochemistry, Rana tigrina. 6263
 excretion, thorium dioxide, Sabellastarte longa. 7710
 function, Petromyzon marinus. 5204
 in vitro transformation of steroids, Salmo gairdneri. 6429

- Natrix cyclopion. 3541
 nephridia of Haemopsis sanguisuga. 6925
 nephridia, Phoronida. 4196
 Petromyzon marinus. 4290
 Petromyzon marinus, USA Great Lakes. 4289
 renal function, Anguilla anguilla. 2341, 2342
 stimulation mitosis, Xenopus. 3525
 toad, ascorbic acid synthesis. 2868
 ultrastructure, Asplanchna. 7696
 ultrastructure of tubules, Parophrys vetulus. 5462
 Xenopus laevis, mitotic inhibitors. 5137

Kiev reservoir, proteolytic activity of soils. 3856

Kinetics,

- growth correlation. 3634
 vertebral anomalies, Menidia menidia, Atlantic. 7403

Kirchneriella obesa, culture. 5831

Kirchneriellosooccus lunatus gen. et sp. n. (Chlorococcales), Pakistan. 7519

Knutsonia lineata, feeding behaviour, Mollusca. 7017

Kogia, distribution, Texas Coast. 6307

Kogia breviceps. 7218

Kogia simus. 7218

Koliella longiseta. 7425

Koliella spiculiformis. 7425

Korea,

- Enteromorpha flexuosa flexuosa. 3237
 Pusan, marine algal communities. 1743

Kraemeria samoensis, distribution, Laccadives. 4303

Krenopsectra fallax gen. et sp. n., (Chironomidae), Alps and Pyrenees. 1958

Kryptopterus bicirrhus, ampullary organs. 876

Kurenkovia magna gen. et sp. n., (Oligochaeta), Kamchatka. 6928

Kyphosus incisor, distribution, Virginia. 7360

L

Labelling, nucleic acids, Marsilea drummondii. 3313

Labeo capensis. 3636

Labeo rohita. 6450, 6471

length-weight relationship. 6470

oxygen consumption of eggs during development. 6472

Labeo umbratus. 3636

Labidesthes sicculus, food and growth, Indiana. 6564

Labidocera acuta, Indian Ocean. 4008

Labidocera pseudacuta sp. n., Indian Ocean. 4008

Laboea. 3889

Laboratory, sub-marine, Black Sea. 4565

Laboratory equipment, dissolved oxygen concentration maintaining. 4564

Laboratory method, for studying of marine benthic diatoms. 1758

Labrus mixtus. 8854

Labyrinthula,

chromosome number. 1834

formation of centriole and similar structures during mitosis and meiosis. 8448

parasite on Thraustochytrium sp, Baltic Sea. 8420

Labyrinthula coenocystis, ultrastructure. 3321

Lacertilia, evolution. 8009

Lacistorhynchus tenuis. 8483

hatching in vitro oncospheres. 5904

Lacrymaria ovata. 7627

Lactania dencyanna sp. n., New Mexico. 8626

Lactarius lactarius. 8156

Lactate dehydrogenase,

Acetabularia. 7502

activity, Artemia development. 662

activity, eye cells, Xiphophorus helleri. 8217

aspartate aminotransferase, serum esterase, Clupea harengus, Norway. 6385

genes, Fundulus heteroclitus. 2319

genetics, Salvelinus. 8111

isozymes. 3652

isozymes, Crustacea, Carolina. 8553

isozymes of 12 spp of flatfish. 466

isozymes, Salvelinus. 8092

Leuconostoc. 1754

Limulus. 4107

Merluccius productus. 3652

Orconectes umosus. 1265

Pleuronectiformes. 1631

polymorphism and transferrin loci, Salvelinus fontinalis. 8114

Lactation, Cetacea. 2907

Lactic acid, production by swimbladder gas gland,

Lepomis macrochirus. 8174

Lactic acid bacilli, beverage manufacture. 4665

Lactobacillus spp., culturing with raw fish. 4276

Lactuca. 5711

Laevapex fuscus. 7863

Laevicarcinus egerensis. 4075

Lagenisma coscinodisci, culture. 1129

Lagenorhynchus obliquidens. 7218, 7227

Lagocephalus lagocephalus, capture in the Mediterranean. 462

- Lagodon*. 7270
- Lagodon rhomboides*,
ecology, Florida. 8993
haematology. 3664
- Lagoon*,
carcinogenic hydrocarbon pollution, Clipperton.
5789
management, Razelm-Sinoe. 4521
Unare, ecology. 4071
wave barrier structure. 6710
- Lakes*,
high mountain, Salmonidae. 2988
solar lake limnology, Gulf of Eilat. 3732
- Lake Erie*, zooplankton. 1669
- Lake Victoria*, ecology of basin. 487
- Lamellaria*. 3452
- Lamellariopsis* subgen. n., South China Sea. 4122
- Lamellibranchia*, Lake Como. 5015
- Lamellodiscinae* subfam. n. 3940
- Laminaran*, from Indian Phaeophyte. 1064
- Laminaria*. 4598, 5734, 6714, 6781, 7488
free space and photosynthesis. 1068
holdfast fauna, British Isles. 7532
- Laminaria digitata*, biometrics. 57
- Laminaria hyperborea*. 3257, 7532
affected by *Patina pellucida* grazing. 727
cultivation under total darkness. 5735
- Laminaria japonica*, TTC as indicators, viability. 7533
- Laminaria ochotensis*, relation between growth and
amino acids. 3258
- Laminariales*,
axenic culture. 1786
ecology, taxonomy, Mediterranean. 5734
organisms on. 2534
- Laminarinase*, marine invertebrates. 3876
- Lamna nasus*. 5164
- Lampadena urophas atlantica* subsp. n., Atlantic
Ocean. 4456
- Lampantus*. 8039
- Lampantus alatus*. 5442
- Lampantus mexicanus*, feeding behaviour, vertical
migrations. 3692
- Lampetra*,
effect of hormones on blood sugar regulation. 6360
gonad developments. 5196
hybrids. 5202
- Lampetra fluviatilis*. 8854
effect of ligands on methaemoglobin. 7253
eggs. 8063
electrophysiology of isolated labyrinth. 6357
intestinal extracts effects on rat pancreas secretion.
8876
larval growth. 8872
methaemoglobin. 5198
osmoregulation in hyperosmotic solutions. 8064
survival aptitude after blocking of gill opening. 7252
ultrastructure of heart and skeletal muscle. 6356
- Lampetra japonica*, host to *Triaenophorus crassus*. 647
- Lampetra planeri*,
Czechoslovakia. 6359
Eudontomyzon mariae, taxonomy. 4287
functional morphology of endostyle and thyroid. 8065
histochemistry, adrenal systems. 5199
histochemistry, follicles of Langerhans, ammocoete.
6358
osmoregulation, ammocoete larva. 5197
spawning behaviour. 4288
trunk myomere number and variation, Czechoslo-
vakia. 4287
- Lamprey*,
heme-heme interaction of haemoglobin. 8061
respiration. 8061
- Lampris*. 5221
- Lampris guttatus*. 5164
- Lampsilis*. 7060
- Lampsilis radiata*,
glochidia infesting *Perca flavescens*. 254
radionuclides relation. 5019
- Land usage*,
effect on aquatic vegetation at high altitudes in S.
Africa. 973
effect on freshwater fish in S.Africa. 975
- Lanice*. 7440
- Lanice conchilega*, uptake and transformation of glucose-
¹⁴C. 1201
- Lanosterol*, chemical correlation with 3 new holothur-
inogenins. 752
- Laomedea*. 4798
- Laomedea gelatinosa*. 6152
- Laomedea longissima*. 7089
- Larus*, hybrids, Iceland. 8824
- Larus dominicanus*, breeding ground, Rangitoto. 8823
- Larus glaucescens*,
cation concentration in salt gland. 4254
cloacal and salt-gland excretion, salinity. 3544
- Larus minutus*. 7205
- Larvae*. 5945
adductor muscle and nervous element, *Anodonta*
cygnea. 7070
Aeschna, anal pyramid. 2708
alevins, nutritional requirements. 3608
Ambystoma, regeneration in denervated limbs. 6207
American plaice. 2322
ammocoete, histochemistry of follicles of Langerhans,
Lampetra planeri. 6358
Anachis spp, New England. 4114
Anguilla marmorata, Yaku Island. 6546
antennule of *Balanus balanoides* cypris larva. 170
arginase activity in liver, *Bufo bufo*. 8748
Ascidia malaca, metamorphosis in seawater lacking
SO₄. 284
Asterias forbesi. 7109
Balanus balanoides. 171
bioassay, copper, Salmonidae. 7453
biological properties of foamy jelly, *Leptodactylus*
prognathus. 5090
biosynthesis of nuclear proteins, *Salmo gairdneri*.
6428
Boschamaella balani. 172
bullfrog tadpole, development of intracellular mem-
branes. 4221
Calicotyle kroyeri, oncomiracidia. 8497
Callinectes sapidus, juvenile growth. 6000
Cancer spp, description. 3385
Caridea, abbreviated development and culture. 2682
Caryophyllaeidae, host specificity. 5882
case-building behaviour, *Potamophylax latipennis*.
6087
catch statistics. 8896
Cephalopoda, Japan. 7897
Chanos, Mannar. 5232
Chaoborus crystallinus, life history, Holland. 3421
Charybdis, Pakistan. 4917
Chironomus salinarius, growth. 1951
chordamesoderm-neurectoderm, *Xenopus laevis*.
6279

Larvae, contd.

- Cirrhina mrigala*, seasonal variations of calcium and phosphorus. 4361
 cleavage pattern, sea urchin. 7122
Clinostomum giganticum. 8495
Clinostomum marginatum. 5889
 Coleoptera, Ethiopian region. 2714
 Copepoda, Lake Balaton. 6946
 Corixidae, N. Europe. 2722
Crassostrea virginica, feeding on *Monochrysis lutheri*. 2007
Crepidostomum, fish parasite, Mississippi. 5891
Culex pipiens, acclimation. 4102
Culex tarsalis, biological control, California. 7829
 Culicidae, Sarawak. 7830
 culture, *Cancer irroratus*. 6002
 culture, *Palaemon serratus*. 6979
 Cyclopoida. 7727
 decapod, osmoregulation. 5999
 deformation, *Triturus pyrrhogaster*. 5132
 Demospongiae. 6872
 development, *Acanthomysis sculpta*. 5989
 development, *Chione cancellata*. 6134
 development from fragmented eggs, *Mytilus*. 7085
 development, *Montacuta percompressa*. 7888
 development, of *Bathynectes superba*. 5995
 development of *Halicarcinus platanus*. 188
 development of *Pisoides edwardsi* in the laboratory. 1270
 development, *Strongylocentrotus*, Japan. 7923
Dictyocotyle coeliaca. 8497
 dispersal, *Philippia*. 3448
 distribution, *Acipenser*, California. 7385
 distribution, Kamchatka shelf. 4906
 distribution, North Sea. 6050
 diurnal migration, *Lucioperca*. 7363
 diurnal rhythms, Trichoptera. 3428
 duration, *Simulium*, Ilim River. 8628
Ecdyonurus, *Baetis*, ultrastructure of longitudinal muscles of abdomen. 7009
Echeneibothrium, parasites, California. 3336
 effects of fish excreta, *Rana esculenta*. 7166
 effects of oil pollution, *Clupea harengus*. 3779
 effects of salt depletion on hydromineral balance, *Ambystoma gracile*. 5071, 5072
Elamena, *Pinnotheres*. 4923
 elopoid leptocephali from Angolan waters. 820
Emerita analoga. 7762
Eusimulium, Yemen. 8625
 first stage of *Chlorotocus crassicornis*. 182
 fish, aquaculture. 6334
 food conditions, Chironomidae. 7006
 formation of defensive reflexes, *Rutilus rutilus*. 8968
 freshwater *Clupeiformes*, contrasted. 819
Gastroptychus, *Uroptychus*, New Zealand. 4044
 Gennadas, Gulf of Mexico. 7768
 Genoa harbour. 6955
 glandular organs, antennae, Stomatopoda. 3403
Globicephala melaena, Genoa. 5155
 glycosaminoglycan degradation. 7947
 gregarious setting of *Crassostrea virginica*. 251
 growth, *Lampetra fluviatilis*, British Isles. 8872
 hatching, *Culicoides furens*, Florida. 4101
 herring, Norwegian fishery. 5240
 herring, settlement volume, Schlei. 5508
Heterocarpus wood-masoni. 4050
Hippolyte inermis, feeding method and mouth parts. 1249
 histogenesis of eyestalk, *Lysiosquilla occulta*. 7780
 homotransplantations, *Xenopus laevis*. 6284
Ilisha africana. 5270
 inhibition of thyroxin-induced tail resorption, *Rana pipiens*. 6257
 Insecta, rearing devices. 4097
jasus, similarity with that of scyllarid. 1255
 lab culture, *Cirripedia*. 5983
 lab culture, Decapoda. 5986
 lab culture, *Rhithropanopeus harrisi*. 4971
Lampetra. 6360
Lebistes reticulatus, influences caused by X-irradiation of parents. 8207
Leptodactylus hylaedactylus. 2855
Limnaea palustris, uric acid synthesis. 3444
 lobster, laboratory cultures. 4935
 lobster, unaffected by bleached kraft mill effluent. 678
 local metamorphic action of thyroxine analogues, *Rana pipiens*. 6255
 locomotion by 'ballooning', Simuliidae. 6071
Macrobrachium acanthurus. 3405
Macrobrachium australiense. 3404
 median eye, Crustacea, South Africa. 7751
 melanogenesis in *Rana pipiens* tadpole. 4233
Mentha aquatica. 4788
Mesochaetopterus sagittarius. 3964
 metabolic rate of starved and fed *Cyprinus*. 3635
 Monogenea parasites of fish, Chesapeake Bay. 5881
 morphological and biochemical changes, parr-smolt, *Salmo gairdneri*, Oregon. 4337
 mosquito, instar determination. 2712
Mugil cephalus, Gulf of California. 7406
Mytilus edulis, salinity and temperature effects. 3469
Neoechinorhynchus saginatus. 5931
 Notacanthiform leptocephali, western North Atlantic. 4465
 nutrition, *Hippolyte inermis*. 4930
 nymph of *Thraulodes speciosus*. 218
Oceanobdella blenii. 4877
Oncorhynchus, *Salmo*, Washington. 6675
Oncorhynchus, Uchiura Bay. 8913
Oncorhynchus masou, Japan. 6407
Oncorhynchus nerka, Alaska. 6412, 6415
Oncorhynchus nerka, Lake Shikotsu. 7278
Oncorhynchus tshawytscha, effects of exposure to γ -irradiation. 8104
Opisthorchis felineus, Caspian Sea. 8507
 organogenesis, Atlanta. 7846
 organotypic culture of gonads, *Bufo bufo*. 5079
Ostrea edulis, Lim Channel. 4157
 oxygen consumption, *Ichthyomyzon hubbsi*. 8062
Panulirus cygnus, Western Australia. 4064
 parasitic, *Cloacitrema philippinum* in *Cerithium ornata*. 5890
Pecten maximus. 6148
Peltoperia maria, feeding behaviour. 6085
 Penaeidae, culture. 2663, 2669
Penaeus duorarum. 2678
 peroxidase cells, *Ascidia*. 7141
Petalomera wilsoni, New Zealand. 3373
Petalonia debilis, plasmalemmasomes. 4702
Petrolisthes armatus. 3374
Petromyzon marinus, meningeal tissue, glucose production. 4292
 phyllosoma, *Justitia*. 7777
 phyllosoma, *Justitia longimana*, Atlantic. 3402

Larvae, contd.

- phyllosoma, of *Arctides guineensis*. 1230
phyllosoma, *Palinurellus*. 7793
phyllosoma, *Panulirus*. 4956
phyllosoma, *Scyllarides gill*. 3394
Physetocaris microphthalmus. 3375
pilidium, Swedish West coast. 2600
Pisces, mouth size. 7264
planktonic stages, *Chionoecetes opilio*, Japan Sea. 6968
Polychaeta, development. 144
Polydora spp. 2616
Pomatoschistus minutus. 6513
Pontophilus norvegicus. 6986
population estimates, *Thunnus*, *Euthynnus*, *Auxis*, Gulf of California. 9010
possible sergestid records, Australia. 213
Potamophilos stendelli. 3323
prezoa, *Cancer magister*. 6003
Proarlarioides tropidonotis. 5910
Proarlarioides tropidonotis in *Ophiocephalus marulius*, India. 8510
problems of aquaculture, *Ostrea edulis*. 6150
Prosimulium. 6088
protein value of free amino acids, *Cyprinus*. 7324
Pseudodiaptomus ardjuna. 7731
Pyrrosoma nymphula, energetics. 2727
Rajonchocotyle emarginata. 8512
Rana catesbeiana, haemoglobin. 6261
Rana dalmatina, modalities of growth of mesonephros. 4222
Rana, Florida. 7998
Rana pipiens, ultrastructure and function in developing retina. 4239
Raphidascaris acus. 5934
Rastrelliger kanagurter, India. 8181
rearing experiments on *Pinctada maxima*. 4159
RNA populations, *Misgurnus fossilis*. 7335
Sabellaria alveolata, growth and settlement. 2618
Schistosoma mansoni, cercarial transmission seasons, Nile Delta. 7686
Schistosoma mansoni in *Biomphalaria alexandrina*. 7847
sea urchin. 6165
sea urchin, protease. 6184
sea urchin, protein synthesis. 5051
Sebastes marinus. 1663, 1664
Simulium aureosimile, Yemen. 8633
Simulium neavei, Tanzania. 8631, 8632
situated viscerum, *Triturus alpestris*. 7196
skin, *Hippoglossoides elassodon*. 459
smolt, River Salatsa. 5291
sodium and chloride transport, *Rana catesbeiana*. 5099
Spongillidae. 6879
Stygarcus bradypus. 3434
survival aptitude, *Mulinia lateralis*. 7889
swimming, *Perca* and *Stizostedion*. 449
symmetry, *Calcarea*. 6882
tadpole, DDT effects, *Rana temporaria*. 7455
tadpole, effects of prolactin on collagen synthesis in tail fin. 7195
tadpole, incorporation of thyroxine carbon in protein, *Rana catesbeiana*. 7981
tail, tadpole, notochord, *Rana catesbeiana*. 8762
taxonomy, *Anax*. 7828
teleost, Brazil. 8076
Terranova decipiens, Nova Scotia. 4866
tolerances and requirements, *Bivalvia*. 6128
transepithelial potential differences, salamander. 5073
treatment with actinomycin D, *Paracentrotus lividus*. 7919
Trienophorus nodulosus, chemiluminescence. 6911
Trypetesa. 7734
Trypetesa, behaviour at metamorphosis. 3367
Trypetesa lampas. 7734
Trypetesa nassarioides. 7734
tuna, collected by midwater trawling, Hawaii. 7377
Tylosurus crocodilus, Bombay. 4479
utilization of protein, *Cyprinus*. 7323
variability in number of myomeres, *Clupea*. 7272
veliger, factors affecting growth, *Crepidula*, *Nassarius*. 6120
viability in polluted waters, Crustacea. 7472
Xanthidae, bibliography. 3408
Xenopus laevis, effects of actinomycin D on nucleolar formation. 6277
Xenopus laevis, synthesis of proteins and RNA. 4250
Xenopus laevis, Vegetalizing induction factor. 6280
Xiphias gladius, Western Atlantic. 4437
Larvapor. 6185
Lasaea rubra,
cyclic activity in digestive diverticula. 7884
gastric shield ultrastructure. 7885
Lasmigona. 7060
Lastroichthys longipectoralis. 7391
Lateolabrax japonicus. 7361
comparative study of growth characters. 5396
Lateral-line system,
Astroconger. 5437
chemoreception in teleosts. 812
Hybopsis. 3644
Lateral scutes, *Gasterosteidae*. 1637
Lateriporus clerici. 8579
Lateriporus skrjabini. 8579
Lates calcarifer, taxonomy. 438
Lates mariae, gill-net fishery, Lake Tanganyika. 6500
Lates niloticus. 7692
East African lakes. 2280
Latia, luciferin. 6113
Latiaxis, distribution of new subgenus and species, South China Sea. 4122
Latiaxis (Lamellatiaxis) marumai sp. n., South China Sea. 4122
Laticauda colubrina,
oral sensory papillae. 783
properties of venom neurotoxic protein. 780
Laticauda laticauda, properties of venom neurotoxic protein. 780
Latiremus eximius gen. et sp. n., (Harpacticoida), Réunion. 6949
Latonopsis hospitis sp. n., Bulgaria. 1210
Latris lineata. 8051
Laurencia,
distribution, Tanzania. 8383
Hawaii and Philippines. 2546
Laurencia intermedia. 3189
Laurencia okamurai, isolation of aplysin, debromaplysin and aplysinol. 63
Lead,
determination in river. 8244
effect on Tubificidae. 9076
pollution. 3748
toxicity to Chlorophyta. 7501
Leander adspersus. 7472

- Leander serratus*, see *Palaemon serratus*.
Leander squilla, sodium metabolism. 4051
Leander tenuicornis, Bay of Fundy. 7778
Leandrites cyrtorhynchus sp.n., Japan. 4052
Leanira, taxonomy. 8530
Leanira gruber, reproduction. 3347
Learchis indica, distribution, Japan, Hawaii. 3456
Learning, catching avoidance, *Cyprinus carpio*. 8958
Learning behaviour,
Carassius. 3627
octopus. 8690
octopus, vertical lobe system. 5039
Lebistes,
qualitative changes in breeding groups. 4459
stability of morphological traits. 1642
temperature adaptation at protein level. 4309
Lebistes reticulatus, (see also *Poecilia reticulata*).
3938, 5615, 7150
colour sensitivity. 3048
feedback mechanisms of sex determination. 6565
inheritance, radiation induced spinal curvatures.
4457
radiation induced spermatogonial exchange. 4458
Lecithaster gibbosus, from *Gasterosteus aculeatus*.
1181
Lecithochirium microstomum. 8179
Lecudina, life history. 8442
Lecudinidae, parasites of polychaetes, life history.
8442
Lefua nikkonis. 3633
Legislation, turtle protection, Seychelles. 4251
Legs, (see also *Limbs*).
of *Alonella* and *Dunhevedia*. 664
Leigalthea gen.n. 8557
Leionathus leuciscus, distribution, Indian Ocean. 4410
Leionathus smithursti, distribution, Indian Ocean.
4410
Leionathus splendens, reproductive cycles and lipid
levels. 4411
Leiostomus. 7270
Leiostomus xanthurus,
behavioural response to salinity change. 897
Ichthyosporidium lesions. 4412
muscle hypoxanthine and volatile bases as potential
quality indices. 900
Lejeunaceae, annotated keys to subfamilies and
genera. 80
Lelapiidae. 6870
Lembos podoceroideis, Gulf of Mannar and Palk Bay.
4028
Lemna. 8137, 8233, 9083
ecology in North Somerset. 3868
frond and flower production in presence of respira-
tory inhibitors. 6824
leaf cells, polarized light effects. 6823
Lemna gibba,
endogenous light-on rhythm in respiration. 7604
respiratory metabolism. 6825
Lemna gibbsii. 7314
Lemna minor. 5523
amitrole effects. 7605
host to *Reesia amoeboides*. 2555
protein synthesis in sterile chloroplasts. 4786
rhizosphere populations. 81
Lemnaceae,
flowering and pollination. 7598
variation in chlorophyll content. 3871
variation in photosynthesis rate. 3871
Length weight relationships, (see also *Growth*).
New England flatfishes. 2323
Lenin, V.I., part played in ecology. 9135
Lenitic environment,
Actinomycetes in mud. 8417
chemical analysis, in molybdenum. 6623
Diatomaceae, Galapagos islands. 5655
distribution of organic matter, Florida. 8235
extraction of pesticides. 6657
¹³¹I uptake by biota, Fern Lake, Washington. 4571
iron accumulation, freshwater plants. 7594
Lake Valkiajarvi, Finland. 6617
limnology, ponds, Hyderabad. 7439
macroinvertebrates. 8245
microbial processes, Mekhteb Lake. 8406
mineralization process. 5775
nitrifying capacity, Finland lakes. 6618
phytoplankton, Lake Balaton. 7428
pollution effects. 6649
population dynamics, Pisces. 8867
southeast Asia. 8232
yeast ecology, Lake Champlain. 5798
Lenormandia chauvinii, Stewart Island. 4527
Lenormandia prolifera, water-soluble pigments. 64
Lensia zenkevitchi sp.n., Atlantic. 8472
Leoblichopsis. 6834
Lepadella pejeri sp.n., Finland. 2601
Lepadichthys caritus sp.n., Seychelles. 934
Lepadogaster. 4401
Lepadogaster candollei, fovea occurrence. 4460
Lepas anatifera, cement apparatus. 1894
Lepeophtheirus,
infection, *Onos* spp, North Sea. 3649
salinity tolerance. 5973
Lepidobactracus. 8734
Lepidocyclos. 7130
Lepidodidymocystis irwini gen.et sp.n., parasite,
Menticirrhus nasus. 4859
Lepidoleuconidae. 6870
Lepidopsetta, strontium and calcium, Sea of Okhotsk.
4305
Lepidosiren paradoxa. 5842
Lepidozona. 6162
Lepidurus. 3979
Lepidurus arcticus, distribution, Hallingdal. 4885
Lepisosteus, influence of aerial breathing on metabo-
lism. 8208
Lepisosteus platyrhincus, *Argulus* infection, Ever-
glades. 4461
Lepisosteus productus, visual cells. 4474
Lepomis. 8158
Lepomis auritus. 8480
Lepomis cyanellus. 7394
Lepomis gibbosus. 5223
Lepomis macrochirus. 4432, 5228, 5268, 7394, 8159
breeding habits. 2282
culture. 6501
effect of 2,4-D. 7447
effect of helminth parasitism. 898
effect of MS 222 on nitrogen excretion. 4413
effect of temperature and body weight on N₂ excret-
ion. 899
Epitheliocystis occurrence. 3661
herbicide effects. 3563
lactic acid production by swimbladder gas gland.
8174
nutritional value of algae. 4414
trematode infection. 3662

- Lepomis macrochirus*, contd.
 x *L. gibbosus*, embryology. 2281
 x *L. macrochirus*, embryology. 2281
Lepomis megalotis, carotenoids. 8983
Lepomis microlophus. 6082
 control of snails. 3451
Leprotintinnus, designation of type species. 6865
Leptocarias. 4270
Leptocephalus giganteus, larvae, western North Atlantic. 4465
Leptocerus. 4977
Leptochelirus pilosus. 9069
Leptocottus armatus, osmoregulation. 8068
Leptocuma kinbergii, littoral, Brazil. 8545
Leptocylindrus. 4486
Leptocythere pellucida. 7812
Leptodactylidae, Neotropical. 5069
Leptodactylus. 8734
 adaptive ecology. 765
Leptodactylus hylaedactylus, larva. 2855
Leptodactylus pentadactylus, presence of caerulein in skin extracts. 6229
Leptodactylus prognathus, foamy jelly. 5090
Leptodiscinae, morphological evolution, cytology and systematics. 588
Leptodora. 5408
Leptodora kindtii. 7720
 calorific values. 1882
 ecological energetics. 1670
 respiratory energy expenditure. 1672
 vertical migration. 4886
Leptolaimus ampullaceus sp.n. 5921
Leptolegnia. 7584
 growth on amino acids. 5805
Leptolegniella. 7584
Leptonereis. 3969
Leptonychotes, morphology of epiphysis cerebri. 6308
Leptonychotes weddelli,
 ecology, McMurdo Sound. 2904
 parasitism by *Corynosoma hamanni*. 3949
Leptoplana. 7089
Leptosphaeria. 6815
Leptosphaeria discors, ecology of salt marshes. 5803
Leptosquilla schmeltzii. 7746
Leptosynapta bergensis. 7116
Lepturacanthus serratus spp., India. 4435
Lernaea barnimiana, biology, Lake George, Uganda. 1886
Lernaea cyprinaeae. 4370
 parasitism of *Rana catesbeiana*. 5098
Lernaeodiscus crenatus sp.n.. Tobago. 4021
Lernentominae. 5966
Lesions. 6327
 'bald spot' disease, *Coregonus lavaretus*, Loch Lomond. 5265
 cysts, *Torpedo californica*. 4301
 fibrous and cystic, ovaries, *Gadus morhua*. 4389
 Ichthyosporidium, *Leiostomus xanthurus*. 4412
 inflammatory, *Alosa sapidissima*, California. 4313
 visual field defects, *Girella nigricans*. 8990
Lessonia nigrescens. 3259
Lestea. 7014
Lestes macrostigma, new to Romania. 711
Lethocerus americanus, elimination rate of radio-caesium. 705
Lethocerus indicum,
 neurosecretion. 7010
 neurosecretory products. 7831
Lethocerus uhleri, dispersal of microorganisms. 2720
Lethrinus nebulosus. 5172, 5173
 length frequency measurements. 5397
Leucaena glauca, chromatography of nonheme iron proteins. 5729
Leucandra aspera. 6882
Leucaspis delineatus,
 acoustic training and circadian rhythm. 6401
 development and ossification of neurocranium. 8909
Leuciscus. 4855, 8145, 8997
 reproduction, Baikalian lakes. 8997
Leuciscus cephalus. 8887, 8934
 diurnal rhythm, nutrition. 8964
 early life-history. 413
Leuciscus idus. 6836, 7333
Leuciscus rutilus, seasonal variations, hepatic drug metabolism. 4374
Leucochloridium papillocirratum sp.n., parasite of *Rallus aquaticus*. 5905
Leucocytes, (see also Blood cells).
 Crassostrea virginica, tissue culture. 247
Leucon spinulosus. 7740
Leuconia. 3314
Leuconostoc, lactic dehydrogenase. 1754
Leucopsarion petersi. 6355
 hypophyseal target organs, histology. 8175
Leucosolenia. 6882
Leucothoe spp., Gulf of Mannar and Palk Bay. 4053
Leucothoides pottsi, Gulf of Mannar and Palk Bay. 4028
Leucothrix mucor,
 Bay of Naples. 5790
 molecular heterogeneity. 1105
 physiological ecology. 4770
Leuctra, Caucasias. 7011
Leurochilus acon gen.et sp.n., (*Dactyloscopidae*), tropical W. Atlantic. 888
Liagora erecta. 8278
Liagora visakhapatnamensis. 8278
Libinia. 4911
Libinia emarginata. 5945
 salinity tolerance. 8584
 sperm ultrastructure. 7779
 visual pigments. 4940
Libya, Arab Republic, Vers Lake, fauna. 1680
Libystes vietnamensis sp.n. 6985
Lichothuria mandibularis. 5966
Licmophora. 5651
Licmophora pfannkucheae sp.n. 5656
Life histories, (see also Reproduction).
 Acrosiphonia sonderi, Iceland. 3227
 Amphiura chiajei. 8703
 Apistonema, morphology. 4620
 Ascocotyle paratenuicollis. 3938
 Asellus aquaticus. 1232
 Bathynectes superba. 5995
 benthos, Pickrel Slough. 5530
 Bonnemaisionia hamifera. 3265
 Bufo calamita. 296
 Callithamnion byssoides, culture. 3267
 Carneophallus choanophallus sp.n. and *Carneophallus basodactylophallus* sp.n. 642
 Carneophallus spp. 4854
 Catostomus santaanae. 8952
 Caulerpa, Oki Islands. 3229
 Caulochytrium gloeosporii. 601
 Centropages typicus. 3359

Life histories, contd.

- Cephalopoda, Japan. 7897
Chaoborus crystallinus, Holland. 3421
Chionoecetes opilio, Japan Sea. 6908
Cloacitrema philippinum sp.n., parasite of Cerithium ornata, Philippine Islands. 5890
Cotylurus, Berlin. 4855
Crangonyx richmondensis. 6011
Cumacea. 185
Cyclopoida. 7727
Cynolebias bellottii. 450
cysts, Schizopyrenus russelli. 4818
Daphnia. 7720
Dasymetra conferta, intramolluscan stages. 5894
Demospongiae. 6872
Echeneidae. 7418
Ephemeroptera, Plecoptera, Lapland. 4980
Eutima commensalis sp.n. 5868
Florideophycidea. 5742
Forcipomyia. 6078
Glythelminis hylureus sp.n., parasite of Lymnaea, Hyla. 5902
growth parameters of Tetrahymena in normal and actinomycin-prolonged cell cycles. 5852
hatching substance, Balanus balanoides. 3365
helminth parasites, Gammarus lacustris. 8579
Ichthyomyzon fossor, Lake Superior. 7251
Ilisha africana. 5270
incubation, growth and mortality of Leuciscus cephalus. 413
Justitia longimana. 3402
Lampetra. 5196
Lecudinidae, parasites of polychaetes. 8442
life-span inhibition in Campanularia hydroid. 632
Ligula intestinalis in the laboratory. 645
longevity, Octopus vulgaris. 7903
Lubriculidae. 2612
Lumbricillus and Enchytraeus in percolating filter. 653
Macrobrachium acanthurus. 3405
Macrobrachium australiense. 3404
migrations, smolt, River Salatsa. 5291
mitosis, Porphyra tenera. 3274
Monostroma spp. 8356
Mordacia spp, Australia. 8873
Nemalionales and allied genera. 65
Neoechinorhynchus saginatus. 5931
Nereocystis leuckeana. 3495
ontogeny of single cells, Mougeotia, Scenedesmus. 4686
Oocystaenium elegans, India. 8361
Padina arborescens. 3262
Papenfussiella, Greenland. 3260
Paromalostomum. 128
partition, Deltophyllum rhabdoides. 5837
Penaeidae, Atlantic coast, USA. 7798
Penaeus duorarum. 2668
Peridinium cinctum, Lake Kinnereth. 3289
Petalomera wilsoni, New Zealand. 3373
Petalonia fascia. 1072
Petrolisthes armatus. 3374
photomorphogenesis, Nostoc commune. 5636
Physetocaris micropthalma. 3375
Pleuroxus denticulatus. 2627
Porphyra miniata. 4718
Prasiola stipitata, Atlantic coasts. 8362
Procyotrema marsupiformis. 5911
Ralfsia clavata, Ralfsia borneti. 4703
respiration, Chironomus strenzkei. 4986
Ribeiroia marini, from Biomphalaria, West Indies. 5915
Sagartia troglodytes. 1851
Salmo, Baltic. 5290
Scenedesmus quadricauda, nuclear divisions. 4685
Schistomysis ornata. 2698
Simulium, Ilim River. 8628
spores, Naccaria wiggii. 4715
Striaria attenuata. 5736
thallus differentiation, Batrachospermum. 3264
Thunnus alalunga, Hawaii. 6541
Tigriopus japonicus. 5980
time courses in synchronized populations, Scenedesmus, Chlorella. 4687
Tisbe in the laboratory. 1222
Trematoda, Massachusetts. 8482
Trypanosoma chrysemidis. 1150
Tylo punctatus. 700
Ulothrix subflaccida, France. 3247
ultrastructure, Aggregata eberthi. 4803
Ulva arasakii sp.n., Japan. 6775
- ## Light,
- absolute values of photon emission from dinoflagellates. 587
adaptation to, by photoreceptor of Procamburus clarki. 204
adaptation to, plankton. 1652
causing destruction of cytochrome a_3 in Prototheca zopfii. 572
control of aquatic insect drift. 702
effect of blue light on respiration in Chlorella. 3233
effect of photoperiod on Daphnia. 5950
effect of preillumination with different wavelengths on Chlorella cells. 8340
effect of red and blue light on carbohydrate turnover in Chlorella. 552
effect of total illumination on Chlorella. 2505
effect on asexual reproduction in hydra. 638
effect on autospore number in Scenedesmus and Chlorella. 1055
effect on chromatophores of Centrostephanus. 753
effect on development of chloroplasts, Euglena. 5764
effect on development of salmon. 386
effect on fixation of Ostrea and Crepidula. 745
effect on growth, Dictyosphaerium. 4612
effect on growth rate of bivalves. 742
effect on nitrate and nitrite assimilation by Chlorella and Ankistrodesmus. 1046
effect on Oscillatoria rubescens. 476
effect on oxygen production, Chlorella. 3234
effect on photosynthesis by thermal algae. 1738
effect on phototaxis in Cladocera, Copepoda and Hydracarina. 1211
effect on potassium, Elodea densa. 4784
effect on sexual reproduction, Dugesia tigrina. 8499
effect on ultrastructure, Chlorogloea fritschii. 8303
effect on ultrastructure, Trebouxia spp. 52
inducing photoreceptor resistance changes, Necturus. 2874
induction of tRNA, Euglena. 3286
inhibiting growth in a yellow and a colourless Chlamydomonas. 558
intensity effect on biosynthesis in Chlorella. 3826
intensity effect on growth rate in Porphyra. 1083
laser experiments on melanophores, Pterophyllum scalare. 7369
light-dependent hydrogen evolution by Scenedesmus.

Light, contd.

1782

- light regime of Black Sea. 2401
- photosuppression of phototactic activity by blue light in *Euglena*. 584
- polarized, modification of reaction patterns, *Lemna*. 6823
- predicting effects on algal growth and phosphorus assimilation. 2507
- reactions of *Triturus vulgaris*. 2889
- regulation of CO₂ fixation, *Chlorella*. 6758
- response and habituation, *Nereis*. 656
- rhythm in respiratory metabolism, *Lemna*. 6825
- role in swarming of *Autolytus*. 2604
- sensitivity of *Onchidoris fusca*. 7049
- spectral sensitivity, *Hydra carnea*. 4844

Light microscopy,

- adductor muscle and nervous elements, larva, *Anodonta cygnea*. 7070
- Amphipleura rutilans*. 1760
- cerebellum and vestibular organ, frog. 8796
- Cyclotella*, *Stephanodiscus*. 5669
- micromeres, sea urchin embryos. 7122
- pineal organ, *Carassius auratus*. 5321
- polyphosphate bodies, gas vacuoles, *Cyanophyta*. 8295
- receptor hairs, *Homarus gammarus*. 7774
- retina, *Pagophilis groenlandicus*. 6309
- shell structure, *Calypptogena*. 6132
- staining of siliceous structures. 8265

Light-producing organs, *Onychoteuthis*, Japan. 8696

Lightiella monniotae sp. n., New Caledonia. 5951

Ligia. 6959

Ligia occidentalis, *palasii*, osmoregulation. 8585

Ligia oceanica, nervous system. 4941

Ligidae. 7741

Ligula intestinalis, tissue response by infected fish. 1863

Ligurian Sea, fishing industry. 5174

Lima excavata, subfossil, coral reef, Marseille. 7083

Limanda. 5188, 6580

- population dynamics, Loch Ewe. 4469

Limanda aspera, changes in sex ratio. 9035

Limanda ferruginea,

- catch statistics and population estimates, New England. 6567

- New England coast. 6566

Limanda herzensteini,

- maturity and spawning, Japan. 7400

- population studies, Japan. 7399

Limanda yokohamae, age and growth. 463

Limbs,

- abnormal hind feet, *Rana temporaria*. 7181
- Alonella* and *Dunhevedia*. 664
- chelae, *Portunus puber*. 4965
- cheliped, reflex control, *Uca pugnax*. 6995
- fin elasticity, *Phocaena*. 6310
- sexual dimorphism in second pereopod, *Pontonides unciger*. 8599
- supernumerary pereopods, *Porcellio dilatatus*. 4964

Limia caymanensis, sp. n., British West Indies. 7401

Limnadia stanleyana, feeding. 151

Limnocalanus macrurus, life cycle, Georgian Bay. 2633

Limnochironomus. 3422

Limnocythere gibbosa, sp. n. 7000

Limnocythere inopinata. 7812

Limnocythere psammophila. 6999

Limnodrilus. 9064

Limnodrilus hoffmeister, feeding in polluted harbour. 2620

Limnology, (see also Chemical limnology).

- altitude and aquatic plants. 2561
- artificial destratification. 3108
- Berenplaat reservoir. 6616
- biochemical oxygen demand. 3751
- Broek de Overmere. 3737
- brown-water stream. 3107
- California coldwater reservoirs. 3723
- caves. 5543
- chemical analysis of Voronezh River. 6619
- chemical, Lake George, Uganda. 3091
- chemical, Lake Tiberias. 3094
- chemical, oxidation of H₂S. 3114
- colonization of Laurel Creek Reservoir (Ont., Canada) by macroinvertebrates. 970
- Columbia River. 9060
- dams and reservoirs, Israel. 3731
- distribution of organic matter, Fresh water, South Florida. 8235
- drying phase, Lake Chilwa, Malawi. 3111
- Durme at Hamme. 7436
- ecology of Lagune du Brus. 489
- England, stony substratum fauna. 3086
- eutrophication. 8234
- freshwater ponds, Hyderabad. 7439
- Germany, thiamine, bacteria and phytoplankton in East Holstein Lake. 1809
- Hawaii. 3097
- high altitude lakes. 3095, 3096
- Idaho reservoirs. 972
- Kragewiel, Belgium. 3740
- Kyrösjärvi lakes, Finland. 1686
- Laguna de Bay. 3722
- Lake Champlain, Vermont. 3085
- lake evolution, Spain. 3087
- Lake George, Uganda. 3725
- Lake Hayq, Ethiopia. 6620
- Lake Lanao. 3735
- Lake Lånsjön. 9059
- Lake Lucerne. 3089
- lake renewal, phytoplankton productivity and species composition. 2364
- Lake Saroma, Japan. 488
- Lake Valkiajärvi, Finland. 6617
- meromixis. 3084
- Middle Parana River Valley. 3733
- mountain lakes, New Zealand. 3099
- N₂ fixation in 2 dystrophic lakes. 968
- nutritional classification of bacteria. 1813
- organisms in the upper Ruhr, Germany. 965
- orthophosphate concentration by sediments, Lake Waco. 9063
- phosphate analysis. 2461
- physical and chemical, Brownlee Reservoir, Snake River. 6418
- physiology of macrophytes in hard-water lakes. 2560
- Potomac River, protozoan aggregation. 2564
- prospective hydrobiology, Meurthe River. 5566
- Protozoa, Lake Tiberias. 2570
- Ramgarh Lake, India. 3112
- sandspit ponds, Presque Isle. 4513
- seasonal changes, British Columbian lakes. 966
- solar lake, Gulf of Eilat. 3732
- southeast Asia. 8232
- springbrook, Tennessee. 3106
- temporary ponds, southeastern Louisiana. 9061

- Limnology, contd.**
 transfer of radioisotopes between detritus and benthic macroinvertebrates. 9064
 transport of algal nutrients. 3109
 tropical meromictic Lake. 3119
 upland impoundments in India. 964
 vascular hydrophytes, Lake Kariba. 2559
 vertical eddy diffusion, Lake Tiberias. 3092
 Vieil-Escout, Bornem, Belgium. 3739
 Vitbergen Pond. 3738
 Wooli lakes, NSW. 4507
- Limnophila**, CCCP effects. 5696
- Limnophora liparia**. 6612
- Limnoria andamanensis sp. n.**, Andaman Islands. 1257
- Limnoria lignorum**, boring activity, Newfoundland. 4054
- Limnoria tripunctata**,
 associated with *Harrietella simulans*. 1218
Corophium acherusicum. 3350
- Limonium carolinianum**. 3865
- Limonium vulgare**, ion and water transport, salt gland activity. 4787
- Limosina brachystoma**. 7788
- Limulus**,
 actomyosin solubility. 8636
 carlinium motor nerves. 3315
 enzymes. 3315
 eye, slow potential. 1966
 gill cartilage. 219, 717
 isometric contraction in glycerinated skeletal muscle. 8635
 receptor action spectra. 2737
 retina, systems analysis. 8638
- Limulus polyphemus**,
 anatomy, cardiac ganglion. 6093
 cardio regulatory nerves. 8637
 genetic variations. 7836
 lactate dehydrogenase. 4107
- Lindra**. 6815
 physiology and morphology of the genus. 603
- Lindra marinera sp. n.** 603
- Line fishing**, catch statistics, Pacific salmon. 3610
- Lineus ruber**,
 abnormal development. 7698
 cephalic organ. 650
- Linopryne**. 5221
- Linuparus trigonus**. 6981
- Lioglyphostomella gen. n.** 4123
- Lioglyphostomella (Dactilia) timorensis sp. n.** 4121
- Liolophora gaimardi**. 7105
- Liolophura**. 6162
- Liostephania**, ecology. 5662
- Liothyrella riveroxae sp. n.** 7929
- Liparis pulchellus**, general biology. 3663
- Lipidotrigla**. 5188
- Lipids**, (see also fats, phospholipids).
 alkoxylipids, triglycerides, *Hydrolagus collieri*. 5213
 analysis, *Hypomesus olidus*. 3609
 blood, *Mirounga*, *Pagophilus*. 7219
 cuticle, *Acanthosentis*. 5922
 cuticle, *Pteronarcys californica*. 1960
 effect of drugs on synthesis, *Euglena gracilis*. 7552
 fatty acid composition, carp. 5340
 fish, studied with use of electron paramagnetism. 804
 influence of acclimation temperature on composition, gill mitochondria, *Carassius auratus*. 7301
 Myctophidae. 937
- Neptunea arthritica*. 3445
Orconectes limosus. 4948
 photosynthetic tissues, *Chlorella*, *Euglena*, and *Anabaena*. 5763
 salmon eggs. 2961
 separation, shark. 6365
- Lipolytic activity**,
 from gram negative bacteria in marine environment. 3858
 toward long-chain triglycerides in *Salmo* muscle. 849
- Lipopolysaccharide**, from *Anacystis nidulans*, identification. 3796
- Lipoxidase reaction**, polyenoic acids, marine oils. 8054
- Lirceus fontinalis**,
 chromatographic studies. 3369
 taxonomy of 2 populations. 2649
- Lissoclinum weigeli**, sp. n., Glenan Archipelago. 4208
- Lissodelphis borealis**. 7218
- Lissomyxine exilis**, effect of prolonged fasting. 2041
- Lithium**,
 direct determination from sea water. 5556
 effect on nucleic acid-synthesis, *Tetrahymena*. 6861
- Lithoderma**. 6782, 7530
- Lithodesmium undulatum**, ultrastructure. 4627, 4628
- Lithophyllum byssoides**. 3841
- Lithophyllum caespitosum* f. *boreale* sp. n., Japan. 4706
- Lithophyllum neoatalayense sp. n.**, Japan. 4706
- Lithophyllum papillosum**. 3841
- Lithophyllum shioense f. tenue**, sp. n., Japan. 4706
- Lithosiphon pusillus**,
 iodine and bromine requirements. 1069
 vitamin B₁₂ requirement. 1070
- Lithovamniaceae**. 6631
- Litocorsa stremma gen. et sp. n. (Polychaeta)**. 3959
- Litopenaeus**. 6044
- Littoral environment**,
 algal association primary productivity. 5518
Anaperus biaculeatus sp. n. (Acqela), White Sea. 8489
 bacteria. 5536
 bacterioplankton, Lake Balaton. 7564
 biogeocoenotic systems. 5538
 classification of sea basins, East Murman. 6639
 Cyanophyceae, ecology, Oahu. 8291
 Diatomaceae, South Africa. 5656
 distribution of infusoria, White Sea. 5539
 ecology of Gammaridea, Hawaii. 5988
 ecology, rocky shores, Kenya and Tanzania. 6632
 effect of chemical wastes, Natal. 8255
 Emerita analogs, movements, California. 7761
 embryology of *Cakile maritima*. 5808
 fauna, Lyme Regis. 7441
 food and feeding relationships of fish, France. 4401
 Glyceria aquatica horizontal distribution, Czechoslovakia. 6822
 gull distribution. 8019
 intertidal fish, temperature sensitivity. 4404
 'kelp forest ecosystem', pollution. 5588
 Leptocuma kinbergii, Brazil. 8545
 mobile fauna of fine sands. 4535
 mobile fauna of hard substrates, Mediterranean. 4536
 nitrifying bacteria. 5780
 Phaeophyceae, Greenland. 7529
 phytoplankton and bacteria, Gulf of Marseilles. 4534
 pollution. 6681, 7788

Littoral environment, contd.

- Porifera. 6873
- protection against waves by use of barrier. 6710
- Sea of Japan. 7444
- seasonal occurrence of fish, Louisiana. 6375
- shorebird and waterbird use, Salton Sea. 7206
- stranding of *Hyperoodon ampullata*, Nova Scotia. 6306
- substrate selection by *Microhedyale milaschewitchii*. 6116
- Terestricythere ivanovae* gen. et sp. n., Kuril Islands. 7814
- tide-pools, ecology, Murman coast. 7442
- White Sea, Ciliata. 7627
- Littorina**. 8429
 - detergent effects. 5589
- Littorina littorea**. 5589, 7441
 - biosynthesis of 3β -sterols. 729
 - effect of ganglion extirpation on leucine incorporation. 7041
 - influence of thermal acclimation on oxygen consumption and temperature. 7867
 - lowered heat tolerance due to parasite *Cryptocotyle lingua*. 724
 - parasitic trematode larvae. 725
 - seasonal changes in temperature effect on oxygen consumption. 7866
 - seasonal variations in biochemical composition. 6114
 - shell growth and infection with *Polydora*. 2758
- Littorina mariae**, epibiotic animals. 4124
- Littorina obtusata**, epibiotic animals. 4124
- Littorina saxatilis**. 5589
 - beneath ice, Spitsbergen. 2759
- Littorina saxatilis tenebrosa**, amino acids. 1987
- Liver**,
 - acid soluble nucleotides nucleosides and bases, *Ommastrephes sloani pacificus*. 7102
 - arginase activity, larvae, *Bufo bufo*. 8748
 - aspartase, *Scyllium*. 8072
 - chromatography, oils, shark, Japan. 8071
 - DNA polymerase, *Salmo gairdneri*. 5295
 - effect of ^{60}Co in *Heteropneustes*. 409
 - effect of dietary steric acid on hepatic lipids, *Salmo gairdneri*. 8921
 - effect of interrenals on carbohydrate metabolism, *Rana temporaria*. 5116
 - effect of thyroxine and thiourea, tadpoles. 8742
 - enzymes, *Amphibia*. 7175
 - glucuronidase, *Rana tigrina*. 5122
 - glycerol kinase, utilization, *Salmo gairdneri*. 7286
 - glycogen levels, drug effects, *Tilapia mossambica*. 9004
 - histology and ultrastructure, *Ambystoma tigrinum*. 5076
 - parasitism by *Cetitrema foliiformis* gen. et sp. n., *Balaenoptera brydei*. 5887
 - phosphomonoesterase, *Oryzias latipes*. 9039
 - pollution effects on enzymes, *Fundulus heteroclitus*. 8203
 - proteins, variation of, *Acris* spp. 6204
 - Rana catesbeiana*. 7981
 - Rana hexadactyla*, enzyme regulation. 3518
 - skipjack, α -glucosidase. 2307
- Living fossils**, *Globorotalia menardii*, Indian Ocean. 7636
- Liza macrolepis**, oxygen consumption during swimming. 3693
- Lobster**,

- action of acetylcholine in presence of organophosphates. 6019
- cytochemistry and ultrastructure of Schwann cells. 6020
- effect of alcohol on axon potentials. 3415
- GABA, nervous inhibitor. 8566
- gaffkemia disease. 191
- physiology, mercury compound. 4932
- physiology, NAD. 4933
- population studies, New England. 2648
- spiny lobster, culture. 4934
- Lobster farm**, in Kinlochbervie, Scotland. 679
- Lobster larvae**, unaffected by bleached kraft mill effluent. 678

Locomotion,

- activity rhythms in *Orchestia* spp. 2658
- Amoeba* and *Chaos*. 90
- amoeboid movement. 7626
- axolotl. 2846, 2864
- 'ballooning', *Simuliidae*. 6071
- cessation under light, *Gyrodinium dorsum*. 7557
- ciliary coordination, *Paramecium*. 5847
- crawling, possible induction by parasite, *Macoma balthica*. 6140
- effect of flow, *Oncorhynchus tshawytscha*. 6423
- forward swimming, *Paramecium*. 7643
- Gerris lacustris* on water surface. 2728
- gliding in *Oscillatoria princeps*. 3800
- jet propulsion, *Dosidicus gigas*. 7900
- local, *Pisces*. 5226
- manouverability, *Carassius auratus*. 8944
- Megaptera novaeangliae. 8030
- Patella vulgata*. 3447
- Salmo*, *Ambloplites*, *Ictalurus*. 5223
- Spirogyra*, *Closterium*. 4695
- spoor, *Branchinecta*. 7717
- swimming, behaviour, chum salmon, Kamchatka peninsula. 5273
- swimming, brain serotonin, *Carassius auratus*. 4359
- swimming, comparison, *Blennius* spp., Mediterranean. 4402
- swimming mechanisms, *Nereidiformes*. 6920
- swimming, *Plantanista gangetica*. 8832
- swimming, *Procambarus clarkii*. 6048
- swimming, speed, oxygen consumption, *Tilapia nilotica*. 4434
- through pipes, *Oncorhynchus*, *Salmo*. 6422
- Locomotor substance**, in *Chrysophyceae*. 1034
- Lollinguncula brevis**, biometrics. 266
- Loligo**, habituation, stellate ganglion. 3487
- Loligo opalescens**,
 - composition of glycopeptides in skin. 8687
 - response of chromatophores to nerve stimulation and drugs. 268
- Loligo pealei**. 7099
 - effect of tetrodotoxin on giant axon. 7099
 - electrophysiology, pharmacology, stomach. 3486
 - giant axon, influence of external potassium on activation of Na currents. 2029
 - monactin effect on potassium permeability. 7901
 - O_2 -linked dissociation of haemocyanin. 749
 - survival, starvation. 8688
 - synaptic current at giant synapse. 2026
 - winter population, mid-Atlantic Bight. 2025
- Loligo vulgaris**,
 - culture of embryos. 8689
 - pollution, radioactive. 4552

- Loligo vulgaris**, *contd.*
tetrodotoxin effects on presynaptic terminals. 7100
transplantation, organ precursors. 3485
- Longevity**,
Chirocephalus, effect of temperature. 666
Mirounga augustirostris, Oregon. 7220
- Longipedia minor**. 7089
- Lophius**. 6376
- Lophogaster**. 5222
- Lophosiphonia**, distribution, Ireland. 8384
- Lophosiphonia subadunca**. 8384
- Loroxanthin**, Scenedesmus obliquus, Chlorella vulgaris. 574
- Lota lota**,
circa-annual periodicity. 3016, 8976
eye muscles. 422
parasitism by Trypanosoma lotae sp.n. 8457
purines responsible for silvering. 813
status, British Isles. 7345
ultrastructure, olfactory neurons. 3653
visual pigments. 3020
- Lota lota lacustris**, asymmetry in trunk vertebrae. 425
- Lotic environment**,
Asellidae of river-bed, Saône. 5992
culture of Cyanophyceae. 5634
distribution of invertebrates in relation to current speed. 5533
drift and upstream movements, Gammarus pulex. 7766
Ephemeroptera, Canada. 6084
macroinvertebrates. 8245
nitrifying capacity, Finland. 6618
optimum escapements, Oncorhynchus nerka, Alaska. 6419
southeast Asia. 8232
square-wave polarographic determination of lead. 8244
streams, ichthiofauna, Portugal. 8860
survival of hatchery-reared salmon fry, Scotland. 6435
toxicity of metals to Chlorophyta. 7501
vertical distribution of invertebrates. 6611
- Lottia gigantea**, territorial behaviour. 5006
- Louisiana**, Macoma (Psammacoma) pulleyi, sp.n. 258
- Lovenia elongata**, reproductive periodicity. 277
- Loxoconcha elliptica**. 8606
- Loxoconcha impressa**. 7812
- Loxomespilum perezii**, host-attachment system. 651
- Loxophyllum asetosum**. 7627
- Lubriculidae**, life history and ecology. 2612
- Lucania parva**. 6544, 8238
- Lucifer faxoni**, biology, Cannaneaia, Brazil. 4321
- Luciferin sulphokinase**, Renilla reniformis. 6895
- Luciferinase**, Photobacterium fischeri. 7575
- Lucilia**, disease of Amphibia, Europe. 7152
- Lucinoma borealis var minor**, hermaphrodites, France. 5020
- Lucioperca**. 5339
diurnal migration. 7363
growth, River Dnepr. 7362
- Lucioperca lucioperca**. 3566, 3608, 4855, 6650, 7299
influence of temperature on embryology. 5405
larvae, energy balance. 4415
migration, Odra Estuary, Poland. 435
- Ludwigothuria atra**. 5966
- Lumbricidae**. 3729
- Lumbricillus lineatus**. 7701
- Lumbricillus rivalis**, life history and metabolism in percolating filter. 653
- Lumbriculus variegatus**. 6929
- Lumbrineris**. 7440
- Lumbrineris fragilis**. 8522
- Lumbrineris impatiens**, reproduction. 3347
- Lumbrineris latreilli**. 3967
- Luminescence**,
Euphausia superba, Antarctic. 4926
Triaenophorus nodulosus. 6911
- Luminescent organs**, iridescent bodies, Chondria. 3268
- Lunar activity**, Anguilla anguilla. 2310
- Lungs**,
phospholipid, composition, vertebrates. 7970
Protopterus aethiopicus, efficiency. 3699
- Lutianidae**. 8488
- Lutianus**. 5172, 5173, 6371
distribution, western Atlantic. 6502
- Lutianus apodus**. 8980
- Lutianus aya**. 8980
- Lutianus capechanus**, return of tag gag. 5403
- Lutianus griseus**. 8980
- Lutianus monostigma**, schooling behaviour, Aldabra. 7366, 8176
- Lycastis indica**, chloride regulation. 3960
- Lycastoides**. 3969
- Lycastoides pontica**. 3969
- Lycodes**. 5221
- Lycodes esmarkii**. 5164
- Lycodes reticulatus**, host to Tanypleuridae fam.n. (Copepoda). 166
- Lyconus**. 7344
- Lycoptera**, taxonomy. 7275
- Lydiaster**. 6177
- Lymnaea**,
control with Lepomis. 3451
shock treatment of eggs. 5008
- Lymnaea auricularia**. 8646
parasitism by cercariae spp, India. 6898
- Lymnaea catascopium**, biomorphology, Michigan. 7043
- Lymnaea natalensis**. 7848
effect of temperature on distribution and control. 723
- Lymnaea palustris**, uric acid synthesis, larvae. 3444
- Lymnaea stagnalis**. 8646
calcium ions as inward current carriers, neurones. 7051
distribution of phospholipids. 2003
effect of density changes on reproduction. 8658
effect of 5HT on heart phosphorylase. 2784
effect of Periplaneta neurohormone D on visceral ganglion. 7047
growth and reproduction. 232
heart innervating neurons. 8660
identified cells in central nervous system. 7044
influence of Periplaneta neurohormone D on visceral ganglion. 8659
osmoregulation. 7865
parasitism by Glythelminis hyleoreus sp.n. 5902
regeneration, cornea externa. 5005
ultrastructure and histochemistry, granulated cells of heart. 7046
- Lymnaeidae**, cytotoxonomy. 3443
- Lymphoid organs**, histogenesis, larval Xenopus. 776
- Lyngbya aestuarii**. 8291
- Lyngbya simplicia**. 8291
- Lyonsiella quaylei sp.n.** 731
- Lyrodiscus minimus sp.n.**, parasite of Ambloplites rupestris, Illinois. 5879

Lyrodon kefersteini, taxonomy, 7084
Lysiosquilla sulcirostris, 7746
Lysmata rathbunae sp.n., North Atlantic, 7781
Lytechinus, 7117
Lytechinus anamesus, distribution, California, 6954
Lytechinus variegatus, 7118, 7913
 reversal by light of colchicine action, 8720
 satellite DNA of sperm, 7118

M

Macellicephala arctica, distribution in Mediterranean, 3963
Macellicephala mirabilis, distribution in Mediterranean, 3963
Machadorythus palanquim, 8608
 Machinery, for shelling cooked shrimps, 2640
Macoma, 7440
 British Columbia, 5021
 distribution and ecology, British Columbia, 2794
 feeding processes, 256
Macoma balthica, 9069, 9070
 central nervous system, 267
 crawling-tracks of parasite infected, 6140
 development in postlarva, 255
Macoma (Psammacoma) pulleyi sp.n., Louisiana, 258
Macrobrachium, speciation, America, 2690
Macrobrachium acanthurus, larval development, 3405
Macrobrachium australiense, larval development, 3404
Macrobrachium lanceifrons, biology and fishery, 2653
Macrobrachium malcolmsonii, population studies, 2652
Macrobrachium rosenbergii,
 aquaculture, 2651, 3406
 biology and development, 2650
Macrocallista, 7877
Macrociemys auffenbergi, Florida Pliocene, 5145
Macrocystis, epibionts as hydrological indicators, 8376
Macrocystis integrifolia, 3259
Macrodasys hexadactylus sp.n., 3953
Macrodon ancyclodon, growth, 4375
Macrognathus, 7422
Macrognathus aculeatus, swimbladder, 7402
Macromolecules, dissolved organic matter, seawater, 4504
Macrophytes,
 Danube, phytophilous fauna, 2395
 effect of fauna of tropical lakes, 2390
Macropipus holsatus, effects of Sacculina on haemolymph proteins, 3388
Macropipus puber,
 electrophoretic analysis, serum proteins, male during moulting cycle, 7782
 serum protein analysis, 6975
Macropodus opercularis,
 melanophores response, 3665
 reproductive behaviour, 8994
Macropogon undulatus, muscle hypoxanthine and volatile bases as potential quality indices, 900
Macroporella, taxonomy, 4673
Macrobrachium, 5222, 5442
Macrospinosa gen.n., for Bola cuja, 429
Macrostromum romanicum, reproduction, 2596
Macrourus berglax, 5164
Macrovalvitrema *microgogoni*, 5881

Macrozoarces americanus, 5399
Macruronus, 7344
Macruronus novaezealandiae, 8051
Macrurus, 5221
Madagascar,
 Ancyliidae, ecology, 3455
 Andriandrano River, fauna, 3729
 aquatic Amphibia, 3509
 Desis crosslandi and Atrophonysia intertidalis, 2730
 Mesochaetopterus, 3964
 Octocorallia, 1849
 Tuléar coral reefs, 3326
Madrepora kauaiensis, 3875
Madrepora, ecology, Banyuls-sur-Mer, 7664
Maera, India, 7738
Maera inaequines, Stewart Island, 4527
Magnesium, excretion by Carcinus maenas, 1236
Magnesium sulphate, effect on free fatty acid formation in frozen Salmo, 854
Magnetism,
 Chlamydomonas reinhardtii kinetic behaviour of electron paramagnetic resonance signal, 4651
 light-induced EPR signal, Anacystis nidulans, 5633
 locomotion of Paramecium in fields, 5846
Maia, 4915
 behaviour, 4055
Maine,
 biometrics, Clupea harengus, Gulf of Maine, 363
 Gulf of, supersaturation of O₂ in coastal waters, 498
 year-class studies of Clupea harengus, Georges Bank and Gulf of Maine, 362
Makaira, 3660
Malacanthus latovittatus, distribution, Tanabe Bay, 3704
Malacca, Tilapia aquaculture, 3675
Malaclemys centrata, urea and osmoregulation, 7202
Malaclemys terrapin, erythropoiesis, 6295
Malapteruridae, taxonomy, 3646
Malapterurus, 5220
Malapterurus microstoma sp.n., 3646
Malate dehydrogenase,
 Chelonia, 8011
 Strongylocentrotus purpuratus larvae, 7924
 vertebrates, 8126
Malawi, Lake Chilwa, drying phase, 3111
Malaya, Bagridae, 394
Malaysia,
 melioidosis, 1109, 1110
 Natrix dunni, sp.n., 781
 Odonata, ecology, 3429
Maldane, 7440
Maleic hydrazide, effect on growth and mutation of Anacystis nidulans, 3795
Males, of Ergasilus laciopercarum, in plankton sample from Newfoundland, 1216
Mallomonas, 508
 taxonomy, 5677
 taxonomy, imperfect forms, 5675
 ultrastructure, 2497
Mallomonas calceolus, 5677
Mallomonas fastigata var. kriegeri, 8324
Mallomonas papillosus, 5677
Mallomonas torquata group, taxonomy, 5676
Mallotus villosus,
 chemical analysis, 832
 fatty acids and alterations during freezing, 833
 hand shears for heading and gutting, 834
 record size and age specimen, Newfoundland, 8096
 water-soluble arseno-organic compounds, 814

- Maltose**, excretion by symbiotic algae of *Hydra*. 637
- Mammalia**. 8086
- heart adaptations to aquatic life. 7211
- Man**, geographical orientation under water. 8268
- Management**, fishery management techniques. 2922
- Manayunkia aestuarina**, distribution. 3961
- Manganese**. 6594
- deficiency, *Euglena gracilis*. 4736
- effect on algal and diatom flora. 2479
- fertilization of fish ponds. 2375
- functional site in photosynthesis, *Euglena gracilis*. 4738
- in fresh water clam. 2021
- nodules, *Bacilloflora*. 6804
- Mangrove swamps**,
Berthelinia caribbea ecology. 3437
Phycomyces, Brazil. 7583
- Manicina aerolata**, feeding and respiration, Florida. 5874
- Manihot utilissimus**. 7314
- Mannosidase**, *Patella vulgata*. 6124
- Manodistomum salamandrae**, from *Ambystoma maculatum*. 291
- Mantidactylus**. 3509
- Maoricolpus roseus**, Stewart Island. 4527
- Maps**, taxometric. 3181
- Margarella**, radula as diagnostic character. 4125
- Margarita**, radula as diagnostic character. 4125
- Margaritifera margaritifera**, ecology, Saxonia. 5022
- Marine environment**,
biogeocoenotic systems. 5538
biological problems, Aegean Sea. 5550
Bryozoa, Germany. 8724
chemical pollution. 6678
decomposition of organic matter. 9136
degradation of hydrocarbon by yeasts. 6695
dissolved organic matter. 3746
distribution, *Gammarus* spp. 7765
ecology in relation to fishery research. 8239
ecology, Swanage Bay, British Isles. 8242
effect of waste water discharge, California. 9090, 9091
fungi, Yugoslavia. 7580
microbial biomass in euphotic zone. 6803
microfauna association study. 7445
mysid ecology, Bahamas and Florida. 5998
ocean food of sockeye salmon. 6403
Ophryotrocha labronica as pollution indicator. 6672
phototrophic sulphur bacteria. 5786
pollution. 5593, 8253, 8254
Porifera, Arctic, Antarctic. 6874
rhopic factor importance. 3744
sewage disposal. 3757
strontium pollution. 6694
trophic relationships, tropical ocean. 5512
variations of bacteria. 5777
yeast occurrence. 5799
- Marine products**, marine invertebrates. 5823
- Marinogammarus marinus**, population studies, Oosterschelde. 6029
- Marionina**, effects of salinity variations on respiratory metabolism. 3962
- Marionina achaeta**. 3962
- Marionina spicula**. 3962
- Marisa cornuarietis**. 8233
- O₂ consumption in relation to body weight and temperature. 1990
- Marketing**, *Holothuria*, Ceylon. 8718
- Marking**,
effect of finclipping on survival of *Oncorhynchus*. 374
fluorescent pigment marking and finclipping in *Oncorhynchus*. 376
Gadus morhua, Arkona Sea and Mecklenburg Bay. 5377
Metapenaeus monoceros. 4057
Oncorhynchus gorbuscha, fluorescent pigment. 6405
salmon and trout, liquid nitrogen. 2959
Salvelinus alpinus. 2985
- Marphysa sanguinea**. 3967
creatine kinase. 8430
- Marshes**, (see also *peat-hags*).
algal flora, Ardenne. 3192
amino acids. 5816
benthos, North Carolina. 7612
coastal, Picardy. 3116
primary production. 8220
Sarracenia purpurea, Quebec. 3310
- Marsilea drummondii**, nucleic acid precursors labelling. 3313
- Marthasterias**. 7113
- Marthasterias glacialis**, characterization of steroid glycoside. 6179
- Marvinmeyeria gen. n.**, (Hirudinoidea). 6923
- Maryland**, life-history of *Trinectes maculatus* in the Patuxent River Estuary. 470
- Massachusetts**, first record of *Stichaeus punctatus* in Bay. 448
- Massartia tubulata sp. n.** 5489
- Mastacembelus armatus**. 7342
- Mastigocladus**, culture, phosphorus uptake. 5634
- Mastigocladus laminosus**. 4605, 5634
- Mastogloia**. 5651
- Mastogloia arabica sp. n.** 5651
- Mastogloia lacazei sp. n.**, Arcachon Basin. 7498
- Mathematical models**,
aquatic ecological system. 4506
Bertalanffy equation. 4558
catch variation, yellowtail, Japan. 8184
phototactic orientation, *Gyrodinium dorsum*. 5766
phyto-sociological analysis. 4542
planktonic Crustacea. 7433
population dynamics, North America. 4522
prawn fishery. 2666
recurrent groups. 4560
stochastic models, population dynamics. 4561
- Mathematics**,
allometric growth function. 6984
biomass and species diversity relationship, zooplankton, Kola Peninsula. 7432
power function, respiration, fish. 3175
use in pollution ecology. 5587
- Mating calls**, orientation in female *Anura*. 2056
- Mattaspongia apaches gen. et sp. n.**, Upper Devonian, Alberta. 5856
- Maturation**,
Amphiura chiajei. 8703
Arthropoda. 7712
Corixidae, rock pools. 7824
effect of gonad extracts, *Asterias amurensis*. 6171
Hydroides dianthus. 8529
induction, *Pisaster ochraceus*. 7921
Limanda herzensteini, Japan. 7400
male, *Oncorhynchus masou*, during anadromous migration. 8910
relation to body size, *Oncorhynchus nerka*. 5275
skin sexual dimorphism, *Salmo trutta*. 7292

Maturation, contd.

- spawning of *Johnius dussumieri*. 896
- Stizotiedion vitreum*, Lake Erie. 910
- Maurollicus**. 4304, 5222
- Maxillary gland**, *Artemia salina*, intercoil connections. 148
- Mayena**. 7844
- Maynea**, southern Chile. 886
- Mayorella sp.n.** 6840, 8449
- Mazocraeoides hargisi**. 5881
- Measurement data**, 3-dimensional representation of. 505
- Mechanical properties**, musculature, *Branchiostoma*. 5064
- Mechanical stimulation**, *Calliactis*. 4836
- Meda fulgida**, biology, Arizona. 4376
- Media**. 6714
 - agar, *Gracilaria*. 7539
 - effect of microflora on organic accumulation, *Chlor-ella* in culture. 5715
 - nutrient content. 4593
 - production of amino acids from algae. 5626
 - Thiorhodaceae, Chlorobacteriaceae. 5786
- Medical uses of aquatic products**. 6714, 6716, 6717
- Medicine**. 6714, 6717
 - use of drugs to preserve fish. 7250
- Mediterranean Sea**,
 - Achrada pulchra*. 580
 - Akhziv*, *Acanthochiton communis* f. *barashi* forma n. 3493
 - amino acids of Rhodophyceae. 3269
 - capture of *Lagocephalus lagocephalus*. 462
 - chemical analysis. 3747
 - Clausophyes massiliana* sp.n. 3921
 - Comesomatidae. 3951
 - commercial fish. 341
 - Evadne nordmanni*. 3987
 - geology. 2466
 - Gulf of Gabes, Siphonophora. 3930
 - Harpacticoida. 4003
 - Macellicephala. 3963
 - Myriactula gracilis* sp.n. 3839
 - rare Protozoa in plankton. 3885
 - whales. 330
- Medlicottia**. 6154
- Megacyclops viridis**. 6845
- Megagobio nasatus**, description corrected. 414
- Megalixalus madagascariensis**. 3509
- Megalobrama**, taxonomy. 7341
- Megalocercus**. 5062
- Megalocypris**. 4975
- Megalodiscus microphagus**, in Amphibia, British Columbia. 2590
- Megalopidae**, skull and swimbladder connections. 5272
- Megalops**. 5272
- Megalops atlantica**, leptocephali from Angolan waters. 820
- Megaloptera**,
 - Dominica. 8612
 - taxonomy, Czechoslovakia. 3431
- Megamyonia**. 7130
- Meganycitiphanes norvegica**, North Sea. 6017
- Megaptera novaengliae**. 7218
 - speed of hump back whales. 8030
- Melosis**,
 - Arbacia* oocytes. 2032
 - maturation division, oocytes, *Acipenser*. 9021
 - ultrastructure, *Lithodesmium undulatum*. 4627, 4628
- Melania spp.**, parasitism by *Cercaria chackai* sp.n., India. 5886
- Melanitta perspicillata**. 7460
- Melanogrammus**. 7346
 - avoidance of ships after hearing noise. 8972
- Melanogrammus aeglefinus**. 8146, 8147
 - distribution, Arctic waters. 5364
 - fecundity, Iceland. 5374
 - fishing industry, Faroe Islands. 5365
 - fishing industry, Iceland. 5361
 - fishing industry, North Sea. 5368, 5369
 - fishing industry, Scottish west coast. 5366
 - α -glycerophosphate dehydrogenase as indexed of iced-storage age. 4390
 - irradiation for storage. 5372
 - length conversion factors for St. Pierre Bank, Newfoundland. 427
 - population estimates, Arcto-Norwegian waters. 5363
 - population estimates, Barents Sea. 5362
 - population estimates, North Sea. 5367
 - stomach content. 424
 - year-class studies, central Scotian Shelf. 426
- Melanophores**, effect of MSH in frog. 2074
- Melanophidae**. 7232
- Melatonin**, pencil fish. 3049
- Melibe mirifica**. 6117
- Melicerita angustiloba**, distribution, New Zealand. 4194
- Melicerius**. 6044
- Melichthys niger**, mating behaviour. 5455
- Melinna**. 5551
- Melioidosis**, Malaysia. 1109, 1110
- Melita palmata**. 7089
- Melobesia**. 3326
- Melobesia mediocris**, developmental morphology. 4714
- Melobesia pacificum sp.n.**, Japan. 4706
- Melobesioidea**, Japan. 4706
- Melosira**. 4586, 5651, 5660, 8317
 - New Zealand. 8317
- Melosira italica**. 5627
- Melosira varians**, permeability relations. 5678
- Membrane electrical parameters**,
 - Nitella. 2524
 - Nitella translucens. 45
- Membranes**, 3942, 4163
 - biogenesis of chloroplast, *Chlamydomonas reinhardtii*. 5700
 - cell wall, ultrastructure of synthesis, *Spirogyra*. 5730
 - changes of plasmid system with drugs, *Euglena gracilis*. 8395
 - characterization, *Dosidicus gigas*. 5034
 - chloroplasts, drug effects, *Elodea*. 5811
 - chloroplasts, electron microscopy, *Cryptophyceae*. 5756
 - cytodifferentiation in *Rana pipiens* oocytes. 4238
 - determination of reflection coefficients, *Valonia utricularis*. 6778
 - effect of streptomycin on plastids in dividing *Euglena*. 5758
 - effect of tetrodotoxin, *Xenopus laevis*. 5138
 - eggs, fate, Teleostii. 7422
 - endoplasmic reticulum, *Rana pipiens*. 4233
 - fixation of phycobiliproteins by glutaraldehyde. 5751
 - intracellular, development, HCl secretion. 4221
 - light-induced changes, thylakoid, *Ulva*, *Porphyra*. 5731
 - phospholipid, temperature adaptation, *Carassius auratus*. 6449
 - photoreceptors, Amphibia and gastropoda. 4248

Membranes, contd.

- plasma membranes from retinal axon, squid. 7898
- plastids, action of nalidixic acid, *Euglena gracilis*. 8399
- polarization, frog. 6239
- potassium, sodium dependent, *Nitella translucens*. 7522
- potentials. 8802
- potential changes, light-induced, *Nitella translucens*. 5724
- potential changes, light-triggered, *Elodea densa*. 7602
- sarcoplasmic reticulum, influence of inhibitors. 5120
- synaprosomes of octopus. 4170
- synthesis, *Chlamydomonas reinhardtii*. 5701
- thylakoid, *Chlamydomonas reinhardtii*, chemical composition changes. 5702
- ultrastructural changes in egg, newt. 4246
- ultrastructure, *Euglena gracilis*. 8396

Membranipora. 7089, 8551

Memory, *Carassius auratus*. 4360

Menetus dilatatus, suppression of egg-laying by infection of *Spirorchis scripta*. 6115

Menidia audens, distribution, California. 7404

Menidia menidia, vertebral anomalies, Atlantic. 7403

Meningo-encephalitis, Myxomycetale as cause. 3863

Meningodora. 8560

Menippe mercenaria. 8553

salinity and temperature tolerance. 6030

Mentha aquatica, embryogeny. 4788

Mercenaria. 7087

effect of pesticides on embryology. 6141

enzymes. 3315

synthesis of dopamine from DOPA. 3466

Mercenaria mercenaria,

accumulation of *Escherichia coli*. 4152

adductor muscle myoglobins. 2011

bacillary necrosis. 6137

decalcification at mantle-shell interface. 2796

infested by *Polydora*. 2795

mucosubstances. 2012

neoplasms and related disorders. 4151

scavenging of ions. 6144

Mercierella. 3975

Mercierella enigmatica. 3975

Mercuric nitrate, effect on Crustacean survival. 2644

Mercury,

induction of circular dichroism in pigments. 4608

organic, absorption and retention by *Salmo* and *Oncorhynchus*. 835

pollution in fish. 6650

pollution, *Pisces*. 7451

Meretrix lamarckii, aquaculture. 7886

Meretrix lusoria, action of thiamine tetrahydrofurfuryl disulphide on heart. 7887

Merguia rhizophorae, semi-terrestrial shrimp. 7783

Mergus merganser. 6434

Meringosphaera. 5489, 5490, 9057

Merismopedia. 6742

Merismopedia punctata. 6742

Meristics,

asymmetry in trunk vertebrae of *Lota lota lacustris*. 425

effect of light, in salmon. 386

Engraulidae, Florida. 6389

Mugil brasiliensis. 6569

Taeniomembras. 2338

Thryssa vitirostris. 393

Thunnus atlanticus, Rio Grande do Norte. 6542

vertebral numbers and identification in *Coryphaena*. 787

Merlangius merlangus, parasites. 3017

Merlia. 3911, 6871

Merluccius. 5179, 7344

Atlantic Ocean. 8978

electrophoretic analysis, muscle myogens. 3651

Merluccius bilinearis, age structure, Gulf of Maine. 6485

Merluccius capensis. 8977

exploratory fishing, southeast Atlantic. 8977

fishing industry, South Africa. 8978

mathematical description growth. 3650

Merluccius merluccius. 4387

feeding behaviour, Argentina. 8150

Merluccius productus,

fishing industry, Pacific. 8047

hermaphrodites, Washington. 8151

lactate dehydrogenase isozymes. 3652

transferrin variants. 4391

Meromictic environment, primary productivity, sulphur and carbon turnover. 5521

Meromixis. 3084

Mertensiella luschani helverseni, Saria, Kasos. 6230

Mesacanthion africanthiforme sp.n. 5921

Meseres. 3889

Mesidotea entomon. 9069

Mesochaetopterus, systematic and biogeographical remarks. 3965

Mesochaetopterus minutus. 3965

Mesochaetopterus sagittarius,

diurnal vertical migration. 1195

evolution of meroplanktonic populations. 3964

Mesochaetopterus xerecus, biochemistry. 1873

Mesocyclops leuckarti. 4491, 4507

Mesodinium rubrum, ultrastructure of chloroplast. 1142

Mesodontopsis. 7019

Mesofavosites. 7665

Mesoplodon. 6318

Mesoplodon carlhubbsi. 7218

Mesophodopsis, taxonomy. 6031

Mespilia, Hatakeziama Island. 1777

Metabolism,

acetate, *Chlorella protothecoides*. 6757

aestivating *Pila globosa*. 235

N-acetylhistidine goldfish. 3005

aerobic microbial. 2549

bile pigment, *Aplysia*. 1978

Ca, effects of hormones in Crustacea. 2657

carbohydrate, effect of red and blue light in *Chlorella*. 552

carbohydrate, *Skeletonema costatum*. 3714

carotenoids in *Artemia salina*. 1877

Castor canadensis, seasonal energy expenditure at northern limit of distribution. 331

community metabolism, Presque Isle. 4513

during development of *Artemia*. 662

fatty acids in *Mirounga leonina*. 333

glucose and amino acids, nervous system, Invertebrata. 7097

glyceryl ether, *Squalus acanthias*. 4300

ketone bodies, *Orconectes limosus*. 4951

Lagodon rhomboides, Texas. 4409

location and function of enzymes, *Rana esculenta*. 4229

metabolic rate, starved and fed *Cyprinus*. 3635

nitrogen, *Protetheca*. 573

oxidative, rotenone, *Pisces*. 8936

Metabolism, contd.

- Penaeus schmitti*. 2664
- photochemical O₂ evolution by *Chlorella fusca* in glucose. 553
- protein in relation to reproduction and moulting of *Paratelphusa*. 199
- Pseudacris triseriata*. 2057
- Pseudomonadida*. 6809
- seasonal variations of hepatic drug metabolism, *Leuciscus rutilus*. 4374
- sodium and water, *Craspedacusta sowerbyi*. 4841
- sodium metabolism. 4051
- temperature dependence of metabolic rate in *Carcinus* and *Patella*. 681

Metaingolfiella mirabilis sp.n. 4056

Metaingolfiellidae fam.n. 4056

Metameric segmentation, oligomerization in Cladocera. 2626

Metamorphosis,

- acid phosphatase, tail, *Xenopus laevis*. 6282
- brush border development, intestine, *Xenopus laevis*. 6281
- chromatographic analysis of serum proteins during moulting cycle, *Macropipus puber*. 7782
- effect of prolactin on thyroxine-induced metamorphosis, *Rana catesbeiana*. 7980
- electroretinograms, *Salamandra salamandra*. 7999
- evolution of haemolymph proteins, *Carcinus maenas*. 6965
- haemoglobin changes, *Triturus viridescens*. 8787
- hormone function, *Carcinus maenas*. 6009
- larvae, *Trypetesa*, influence of age. 3367
- Orconectes limosus*. 6977
- Philippia*. 3448
- photoperiodism effects, *Hemigrapsus nudus*. 7769
- prosobranch gastropods. 1986
- Rana pipiens*. 7173
- Trypetesa*. 7734

Metamysidopsis swifti. 6963

Metapenaeopsis. 6039

Metapenaeus. 6039, 6939

Metapenaeus affinis, abnormalities. 4058

Metapenaeus dobsonii, free amino acid pattern. 8586

Metapenaeus monoceros, observations on marking with vital stains. 4057

Metaphosphates, *Anacystis nidulans*. 1025

Metasphaeria. 6815

Metastrombidium. 3889

Metavargula ampla, host to *Sphaeronellopsis dikrothrix* sp.n. 1275

Metazoa, significance in evolution. 8460

Methallibure,

- effect on ovulation induced by pituitary extract in vitro. 318
- effect on spermatogenesis, *Poecilia reticulata*. 2328
- reproduction in *Rana*. 316

Methanobacterium formicicum. 6805

Methionine, biosynthesis in *Ochromonas malhamensis*. 20

Methods,

- aging salmon by examination of fin rays. 373
- anaesthesia and killing in experimental surgery on fishes. 344
- automatic counter for fingerlings. 796
- biomass determination, phytoplankton. 475
- brackish water Protozoa studies, Hiddensee. 8441
- breeding and studying freshwater snails under continuous water change. 232

brominating water to inhibit growth of microorganisms. 1016

capture-recapture, population estimates. 8264

Cartesian Diver methods for respiratory rates of aquatic invertebrates. 6700

closed ecological systems. 1013

continuous measurement of respiration in marine organisms. 1008

controlling growth of algae and bacteria with methylene bithiocyanate or monohalomethyl thiocyanate. 1016

cooking shrimp. 1229

coping with *Mnemiopsis leidyi* in plankton samples. 7671

correlation, regression, density dependence. 8262

counting method for protozoan cultures. 3877

culturing *Oscillatoriaceae* in synthetic medium. 530

diversity index, benthic macroinvertebrates. 8437

diving. 8260

electron paramagnetism for studying fish lipids. 804

electrophoretic, for fish sp identification. 343

estimating *Verticillium albo-atrum* propagules in fields and irrigation water. 608

extraction and mounting of gastropod radulae. 223

fertilization of trout eggs with cryo-preserved sperm. 380

fish pumping. 794

fixation of algae by OsO₄ in CCl₄. 565

genetic methods of combating fish diseases. 872

grouping plankton samples by numerical analysis. 951

immobilizing microorganisms in a polymer cage. 1145

increasing digestibility of algae used as food for livestock. 48

isolation of algae. 1017

isolation of Protozoa and algae from bacterial contaminants. 9105

isolation of *Pseudomonas pseudomallei* from soil and surface water. 1109

judging completeness of hypophysectomy in goldfish. 397

key to identification of canned salmon by scale characteristics. 370

larval settling apparatus for polychaetes. 6696

lyophilization, use in phycology. 8261

maintenance of *Ligula intestinalis* in the laboratory. 645

measurement of primary production of algae. 8287

micro-tags for salmon. 8266

narcoticization of benthos invertebrates. 5821

new neuston net. 1012

obtaining bacteria-free cultures of marine phytoplankton. 478

obtaining precisely timed inseminations in *Poecilia*. 943

phosphate removal from sewage by lime-biological treatment. 989

phytoplankton population estimates. 5499

preparation of fungicidal and bactericidal benzimidazole derivatives. 1015

preparing dried lubricous algae. 2485

production of microbiological peptones from fish meat. 802

pulping and boning fish. 801

pumping device for collection of *Micropterus* fry. 797

quantitative method for study of periphyton. 1019

Methods, contd.

- removing excreted organic solutes from photo-synthesizing benthic algae. 543
- separating invertebrates from sediments. 507
- simulating reservoir conditions. 1010
- sodium tripolyphosphate to control fish shrinkage during hot-smoking. 803
- special hand shears for heading and gutting capelin. 834
- study of marine benthic diatoms. 1758
- study of peridenean thecae. 1080
- sugar-flotation technique. 837
- tank for simulating rapids. 1011
- transportation of *Roccus saxatilis*. 905
- ultrasonic tracking of *Roccus chrysops*. 904
- vertical plankton and water sampling device. 1009
- Methyl glyoxal**, effect on growth and cell division of *Chlamydomonas*. 1043
- Methylene bisthiocyanate**, for controlling growth of algae and sulphate-reducing bacteria. 1016
- Metridia ochotensis**. 4893
- Metridia pacifica**. 4893
- Metridium senile**. 7089
- Metriocnemus**. 3310
- Mexico**,
 - bacteria in shellfish. 242
 - coast, shrimp and prawn production. 2696
 - Guafalupe Island, *Stolonophora* gen.n., (*Cystoseiraceae*). 1789
 - Gulf of, Calanoid copepods. 153
 - Gulf of, first record of *Bathyclupea argentea*. 924
 - Phaeophyceae of the eastern Gulf. 54
- Mexiconiscus laevis**, caves, Mexico. 7784
- Miamiensis avidus**, osmoregulation. 1835
- Miamira magnifica**. 6117
- Michigan**, *Hyla* var. *versicolor* from Shiawasee County. 229
- Micralestes acutidens**, feeding behaviour. 7334
- Micrasterias**. 3817
 - inhibition of nuclear migration. 6768
 - Osaka. 3239
- Micrelenchus micans**, Stewart Island. 4527
- Microbiology**. 7567
 - Adriatic Sea. 9093, 9094
 - Aeromonas salmonicida* as cause of disease in *Oncorhynchus* spp. 7279
 - antibiotics, *Garcinia morella*. 4761
 - antimicrobial agent. 6720
 - association. 7445
 - association of Periphyton. 4583
 - bacteria in fish solubles. 8155
 - bacteria in poultry lagoon. 6806
 - bacteria in salting fish. 6808
 - bacterioplankton as food source, Black Sea. 6595
 - bacterioplankton, Danube. 6592
 - bacterium for degradation of cartilage keratosulphate, whale. 8836
 - biomass, ocean profiles. 2365
 - biomass, seawater. 6803
 - bloom organisms. 9058
 - canned, pasteurized crab cake mix. 8565
 - control of microorganisms using poly-bromide resin. 5570
 - control using tandem polyhalide resin. 9131
 - damage of netting yarn. 6316
 - damage of netting yarns, fisheries. 6315
 - degradation of crude oil. 6689
 - energy concepts. 2549
 - external hydrolysis of polysaccharides in seawater.

2487

- fish fingers. 3586
- α Fisher variation index. 5769
- food irradiation. 8412
- growth kinetics, heterogeneous populations. 1702
- Homarus americanus*, British Columbia. 6024
- Kyrösjärvi lakes, Finland. 1686
- oil-containing sewage. 3778
- organic substrates supporting growth of bacteria. 6807
- oxygen consumption by microflora. 8402
- pesticides. 9130
- pollution. 6681
- pollution, River Tyne. 6682
- prevention of microbial growth in organic materials and water. 6801
- process for treatment of sulphide-containing slurries. 9115
- processes in Mekhteb Lake. 8406
- respiration rate, microflora. 4750
- Seas of Hiuchi and Bingo. 7443
- sediments with relation to hydrocarbons. 2548
- standards for fishery products. 6671
- surface water supplies in relation to use for drinking. 8407
- treatment of sewage. 8410, 8411
- volutin granules in *Zoogloea ramigera*. 6813
- water purification. 4762
- water, sanitary importance. 2419
- water softener resins. 595
- water treatment with bromine. 6713
- Microcassiope orientalis**, southern Japan. 8594
- Microciona ascendens**. 3904
- Microciona fallax**. 6877
- Microciona prolifera**. 6714
- Microciona spinarchus**. 3904
- Micrococcal nuclease**, hydrolysis of crab d(A-T)_n and biosynthetic (dA)_n·(dT)_n. 1227
- Micrococcus**. 5772, 6679, 6806
- Microcoleus**. 3732
- Microcoleus apludosus var. acuminatus**. 4604
- Microcoleus cavanillesii**. 4604
- Microcoleus chthonoplastes**. 8291
- Microcoleus lyngbyaceus**. 3801
- Microcoleus vaginatus**, trichome breakage. 1753
- Microcotyle poronoti**. 5881
- Microcotyle salpae**, anatomy and biology. 4416
- Microcyclops minutus**, regeneration and growth. 8546
- Microcystis**. 3309, 3574
- Microcystis aeruginosa**. 3799
 - cation requirements. 2509
 - changes in biochemical composition of host *Perca fluviatilis*. 4422
 - effect of cultivation conditions on growth. 3797
 - gas-vacuole membranes in isolation and analysis. 2493
 - gas-vacuole membranes, ultrastructure. 2494
 - interrelation of sulphur and phosphorus in nutrition. 5635
 - isolation and structure of endotoxin. 4613
- Microcystis ferruginea**. 7425
- Microdesmus suttkusi**. 6320
- Microgradients**, mud-water interface. 1685
- Microhedyle milaschewitchii**, habitat selection, Yugoslavia. 6116
- Microhemidiscia ortmanni** gen.et sp.n. (Porifera), Carboniferous, Uruguay. 5855
- Microhydrula pontica**, Roscoff. 5875

- Microjanira dentifrons** gen.et sp.n. (Parasceloidea).
Bay of Naples. 7785
- Microlaimus spirifer** sp.n. 5921
- Micromesistius**. 5179
- Micromonas pusilla**. 4633
- Microna ateni** sp.n., Spain. 7871
- Micronutrients**,
effect on algae. 2480
plankton production. 2384
- Microorganisms**,
control. 241
control using fumaronitrile. 1119
dispersal by *Lethocerus uhleri*. 2720
found during processing of *Pandalus jordani*. 197
immobilization in polymer cage. 1145
in drinking water, Delhi. 68
in seawater, response to organic enrichment. 1807
interaction of. 592
marine species utilizing inorganic nitrogen compounds. 70
patented control method using bromine. 1016
polarity of proton translocation in photosynthetic forms. 591
- Microphallus pygmaeus**, amino acids. 1937
- Microphallus similis**, amino acids. 1987
- Microphthalmus**, spp, Netherlands. 145
- Microphysogobio**, taxonomy. 414
- Micropogon**. 7270
- Micropogon undulatus**,
behavioural response to salinity change. 897
ecology, Florida. 8993
- Microporella trinervis**. 6185
- Micropsectra** spp.n., taxonomy, Central Europe and North Africa. 8627
- Micropterus**. 5565, 8158
penetration, *Proteocephalus ambloplitis*. 5912
- Micropterus dolomieu**,
distribution, Snake River. 7367
reproduction and growth, Ontario. 8177
- Micropterus salmoides**. 3608, 5268, 7339, 7394, 8159, 8860.
forage size preference. 4417
herbicide effects. 3563
population, Iowa lake. 6504
technique for sexing. 5400
use of Oregon moist pellet as feed. 6503
- Microscopy**,
antennae and cerci, *Perla marginata*. 7015
effects of 2,4-D on *Poterochromonas stipitata*. 6745
freeze-etching of outer rod segments, *Rana esculenta*. 6246
neuromast, 72-hour stage, *Cirrhina mrigala*. 7308
- Microsiphona potamos** gen.et sp.n., (Chrysophyceae), Ohio. 8316
- Microsomacanthus parvula**, from *Erpobdella octoculata*. 138
- Microspora**. 5800
- Microsporidia**, new species. 3890
- Microsporidia**. 8082
taxonomy. 7500
- Microstoma kitaharae**. 4575
- Microtubule structure**, in *Euglena granulata*. 1794
- Microvilli**, of *Tylocephalum*. 2593
- Mid-Atlantic Bight**, winter population of *Loligo pealei*. 2025
- Migration**. 6226
ACTH and prolactin in pituitary of migratory *Oncorhynchus*. 839
and school size in fish. 340
- Artemisia longinaris*. 2642
change due to sewage pollution, Pisces, Maryland. 6633
change during geological time. 5162
- Chelonia mydas*, Costa Rica. 8013
- cod, Skagerak. 3013
- continental, Pisces. 5402
- Cypsilurus opisthopus*, Japan seas. 3688
- diurnal, Mediterranean. 4537
- diurnal, survival, *Lucioperca*. 7363
- diurnal variation in availability of *Sebastes mentella*. 6523
- diurnal vertical, of *Mesochaetopterus sagittarius* larvae. 1195
- drift of *Asellus coxalis septentrionalis*. 1231
- Emerita analoga*, California. 7761
- feeding behaviour prior to, *Oncorhynchus nerka*, Bristol Bay. 8916
- fish. 8239
- Gammarus pulex*. 7766
- Gammarus zaddachi*. 1910
- gene dispersal in *Rana pipiens*. 6253
- Halichoerus grypus*. 5157
- Hippoglossoides*, Newfoundland. 461
- Homarus americanus*. 6022
- in the lotic environment. 8236
- Jasus lalandii*. 193
- light threshold controlling vertical migration of *Chaoborus punctipennis*. 4099
- local, Pisces. 5226
- Lucioperca lucioperca*, Odra Estuary, Poland. 435
- mackerel, Japan. 8160
- maturation, male, *Oncorhynchus masou*. 8910
- Merluccius productus*, Pacific. 8047
- Micropterus dolomieu*, Snake River. 7367
- migrating populations, *Oncorhynchus tshawytscha*, Washington. 6424
- navigation, *Delphinus delphis*. 8029
- northern fur seals, Japan. 8026
- Notophthalmus viridescens*. 2856
- olfactory responses to waters in homing *Oncorhynchus*. 841
- Oncorhynchus gorbuscha*, Alaska. 6404
- Oncorhynchus keta*. 3612
- Oncorhynchus kisutch*, tagging. 4324
- Oncorhynchus masou*, Japan Sea. 7280
- Oncorhynchus nerka*, Alaska. 6420
- Oncorhynchus nerka* larvae, Lake Shikotsu. 7278
- Oncorhynchus*, *Salmo*, fish screen for guiding, Oregon. 8870
- Oncorhynchus*, *Salmo*, through pipes, Columbia River. 6422
- Penaeus duorarum*, Florida. 6042
- Penaeus orientalis*. 6982
- Penaeus setiferus*. 2687
- Phocoena phocoena*, Baltic Sea. 4264
- Pisces, traps. 8891
- Rana catesbeiana*, Ontario. 3511
- Salmo salar*, effects on corpuscle of Stannius. 8925
- Salmo salar* returning for 5th and 6th consecutive spawning. 384
- salmon and trout, Pacific. 5284
- salmon, North Pacific. 3611
- smolt, River Salatsa. 5291
- speed of Megaptera novaeangliae. 8030
- Squalus acanthias*, North Atlantic. 5219
- Thunnus alalunga*, Atlantic Ocean. 2305
- Thunnus albacares*, Gulf of Guinea. 4439
- Thunnus*, *Tetrapturus*. 5424

Migrations, contd.

- upstream, *Philopotamus montanus*, Swedish-Lapland. 6086
- vertical, diurnal, *Centrobranchus nigrocellatus*, Madeira. 9027
- vertical, effects of solar eclipse, zooplankton, Gulf of Mexico. 9053
- vertical, *Lampanyctus mexicanus*. 3692
- vertical, *Leptodora kindtii*. 4886
- vertical, mesoplankton, western Mediterranean. 4496
- vertical, *Pandalus jordani*. 6980
- vertical, *Pseudosciaena polyactis*. 442
- vertical, Rotifera, Canada. 3715

Milleporina, from Israel South Red Sea Expedition. 123

Milosaurus mccordi sp.n., Pennsylvanian, Illinois. 6296

Mimocalanus sulcifrons, 5544

Minchinellidae. 6870

Minchinia costalis, electron microscopy of sporulation. 5840

Minchinia nelsoni,

nucleic acid and nucleic protein patterns. 3891

resistance of oysters, Delaware. 3461

Mineral deposition, interference in *Hymenomonas*. 2566

Minerals,

content, *Spirulina* spp. 4615

inorganic salt requirements of marine bacteria. 5776

manganese nodules, *Bacilloflora*. 6804

nutrition, Characeae. 550

nutrition, Chlorophyta, *Scenedesmus*. 4688

nutrition, *Scenedesmus quadricauda*. 7523

water analysis. 3781

watercress. 4796

Miocene,

non-marine diatoms, Washington. 15

palaeoecology of diatomites, Oregon. 16

Mirounga angustirostris. 7223

lipid composition of blood. 7219

mortality, San Miguel Island. 8834

stomach contents. 4260

Mirounga leonina,

distribution, Weddell Sea. 4261

growth. 791

metabolism of fatty acids. 333

Misgurnus anguillicaudatus. 3633

distribution, California. 3647

Misgurnus fossilis. 8086

ATP in respiration control. 5053

differentiation capacity of isolated blastoderm. 877

genome transcription. 7337

HMPS enzymes in early development. 878

larval RNA populations. 7335

sperm genetic study. 6473

synthesis of RNA during embryogenesis. 7336

Mitochondria,

effect of antibiotics on development in *Euglena*. 1076

Euglena gracilis, physiology. 3843

phosphorylating, from *Astasia*. 2543

Mitosis,

antimitotic agents, *Condylotoma magnum*. 5836

apparatus, amoebae. 4804

bipartition, trophont and theront stages, *Deltophylum rhabdoides*. 5837

Bulinus sericinus cells. 8653

cardiac tissue, *Spisula solidissima*. 3479

Chlorophyceae. 7499

cleavage morphology, Articulata. 7932

cleavage of egg, *Ambystoma mexicanum*. 7949

Closterium littorale. 8353

cortical and subcortical changes preceding cleavage

eggs, *Triturus pyrrhogaster*. 8786

cytokinesis, *Spirogyra*. 4694

effect of acids, *Triturus helveticus*. 5130

effect of rate and number, RNA synthesis, frog. 7989

eggs, Invertebrata. 7117

evolution of mitotic apparatus in plant cells. 1742

extraventricular, nervous system, Amphibia. 7198

formation of centriole and similar structures,

Labyrinthulida. 8448

influence of temperature, light and salinity, *Detonula*. 3217

inhibitor, colchicine, *Tetrahymena pyriformis*. 8453

inhibitor, kidney, *Xenopus laevis*. 5137

mitotic chromosomes, *Petromyzon marinus*. 6361

mutations, *Anacystis nidulans*. 4610

nuclear envelope, *Noctiluca miliaris*. 8401

Oedogonium. 1054, 4676, 4677

Oocystis. 6748

polynucleotide peptide complex, *Chlorella vulgaris*. 6764

Porphyra tenera. 3274

retina, *Protopterus aethiopicus*. 7416

reversal by light of colchicine, *Lytechinus varia-*
gatus. 8720

Scenedesmus quadricauda nuclear division. 4685

sea urchin embryos, dactinomycin effects. 2831

spleen and peritoneum, macrophage, *Molge vulgaris*. 8754

Spongillidae. 6880

stimulation, kidney, *Xenopus*. 3525

ultrastructure, *Spirogyra*. 3245

Ulva mutabilis. 3832

Vexillifera bacillipedes. 2571

Mitotic apparatus, isolated from *Pectinaria* eggs. 1197

Mitra lopei sp.n. 5007

Mitra verweyi sp.n., southeast Asia. 7035

Mitrella carinata, mimicked by *Pleustes platypa*. 2655

Mitridae, eastern Pacific. 237

Mitrolumna keenae sp.n., Galapagos Islands. 2756

Mixophyces, taxonomy. 2073

Mixtopagurus sp.n., symmetrical hermit crab, New Zealand. 7786

Mizuhopecten yessoensis, population studies, Japan. 6142

Mnemiopsis, enzymes. 3315

Mnemiopsis leidyi. 7671

Mnierpes macrocephalus, amphibious ecology. 6505

MnO₂-reductase, *Bacillus*. 6804

Mocambique, rediscovery of *Puerulus carinatus*. 1274

Models,

chemical model of organic carbon in seawater. 3075

species diversity. 1727

Modiolus, 7874

osmoregulation. 8675

Modiolus carvalhoi. 6145

Moina micrura. 6654

Mola mola. 5163

Molara. 4850

Molecular heterogeneity, *Leucothrix mucor*. 1105

Molge vulgaris, mitosis in spleen and peritoneum macrophage. 8754

Molgula. 7138

Molgula griffithsii, structure of tunic. 285

Molgula manhattensis, 5060, 7089

synthesis of uric acid. 7143

Molineus cynictis thosi. 7693

Molliensia sp., freeze-etch study of skeletal muscle. 5456

- Mollusca.** 5529, 5547, 5549, 7116, 8241.
 Akkeshi, Hokkaido, Japan. 1968
 aquaculture. 4997
 aquaculture, Scotland. 8554
 archaeological, California. 2740
 boring, Red Sea. 2799
 Brazil, rare spp. 2753
 cardioactive agent extraction. 3465
 Cenozoic marine spp, North America. 222
 changes in enzymes during storage. 5031
 chromosome constitution, Japan. 6162
 control. 241
 criticism of "Recent Mollusca of A. A. Gould" by Johnson. 1970
 dependency of productivity. 4109
 ecology, Great Plains, Hungary. 2754
 enzyme content of muscle cells. 4111
 enzyme, octopine and lactate dehydrogenase. 4111
 estuaries of Rhine, Meuse and Scheldt. 2791
 fossils, California. 4995
 fossils, Mexico. 4996
 fossils, Oahu. 7020
 fouling. 3874
 gear for capture, dredges. 3460
 Holocene, Gulf of Omega. 1971
 hydrolytic enzymes in digestive cells. 259
 Indian Ocean. 8641
 inhabiting Sargassum, Indo Pacific. 2773
 intramolluscan stages of *Dasymetra conferta*. 5894
 neoplasms and related disorders. 4110
 non-marine, Katalla, Alaska. 2766
 number of living spp. 221
 parasitism by trematodes, Amudar'ya Delta. 8643
 parasitized by *Aspidogaster conchicola*. 2808
 pigmentation, computer simulation. 3454
 Port Moller Bay, Alaska. 2739
 shell formation. 1988
 shells, Sr/Ca ratio. 1969
 Sør Trødelag, Norway. 2738
 South Arabia. 7059
 thiaminase, Philippines. 4573
 type specimens, American Museum of Natural History. 4108
 X-ray diffraction patterns of shells, Indian waters. 6098
- Molluscicides.** 7483, 7686, 8644
 complex organo-tin compounds. 7057
 diphenyl ethers. 2741
 preparation containing urea or thiourea derivatives. 1972
 preparation for use. 4127
 quinazoline derivatives. 3864
 N-tritylmorpholine. 7848
- Molone americanus**, use of scale method in ageing. 5401
- Molpadia intermedia.** 7440
 haemaglobins. 8711
- Molva dypterygia**, taxonomy, distribution. 3018
- Molva molva.** 8515
 parasitism by nematodes. 3950
- Molybdenum**,
 determination in lakes, Canada. 6623
 Vellar Estuary, India. 3117
- Monamphiura aster.** 7119
- Monanchora barbadensis**, Barbados. 4825
- Monas.** 7620
- Monhystera.** 4861
- Monhystera andrassyi sp.n.**, Lake Balaton. 2599
- Monhystrium.** 7690
- Monhystrium inquilinus.** 7690
- Monobothrium hunteri.** 5882
- Monobothrium ulmeri.** 5882
- Monochromadora.** 7689
- Monochromadorinae.** 7689
- Monochrysis.** 7087
- Monochrysis lutheri.** 5684
 chromatographic analysis of sterols. 6743
 effect of salinity changes on growth. 3809
 prey of *Crassostrea* larvae. 2007
- Monoculodes minutus.** 6950
 distribution, Laptev Sea. 6950
- Monoculodes schneideri.** 7745
- Monocystis ascidia.** 3875
- Monodonta lineata.** 6118
- Monodonta turbinata**, pigments in shell. 8661
- Monogalactosyl diglycerides**, biosynthesis in *Euglena gracilis*. 1078
- Monogenea.** 6900
 gen.n., South Africa. 6900
 larvae, parasites, Chesapeake Bay. 5881
- Monohalomethyl thiocyanate**, for controlling growth of algae and sulphate-reducing bacteria. 1016
- Monohystrium inquilinus sp.n.**, host to Nematoda. 1190
- Monoliropus falcimanus**, Gulf of Mannar and Palk Bay. 4028
- Mononema perpendiculare sp.n.**, Lithuania. 6853
- Monopisthocotylea.** 5881
- Monoplacophora**,
 distribution, Pacific Ocean. 4172
 distribution, South Atlantic Ocean. 4173
- Monoplex.** 7844
- Monospilus.** 6937
- Monostroma**,
 life history. 8356
 observations, N. Baltic Sea. 44
- Monostroma nitidum.** 3190
- Monothea recta sp.n.** 3912
- Montacuta percompressa**, larval development. 7888
- Montastrea cavernosa**, feeding and respiration, Florida. 5874
- Montipora.** 3933
- Montipora manauliensis sp.n.**, Gulf of Mannar. 3929
- Mopalia hindsi recurvans**, range extension. 2822
- Mopsella ellisis**, association, shrimp, Indo-Pacific. 4909
- Mordacia**, life history, Australia. 8873
- Mordacia mordax**, gametogenesis and fecundity. 805
- Mordacia praecox**, gametogenesis and fecundity. 805
- Moringua linearis**, chloride regulation. 4463
- Morone chrysops**, age and growth, Mississippi River. 8995
- Morone labrax.** 5163
- Morone saxatilis.** 5402
 summer behaviour. 6506
- Morphogenesis**,
 abnormal, *Acetabularia mediterranea*. 28
 algae. 3187
 cells, Porifera. 6878
 cellular differentiation, Porifera. 6884
 Hydra mesoglea fibre system. 5871
 control, *Hydractinia echinata*. 7669, 7670
 cortical anatomy of *Stylonchia notophora* during binary fission. 5851
 cytosomes, *Anodonta cygnea*. 4140
 experimental; in ciliates. 622
 inductive action, primary ureter on mesonephros, Amphibia. 4219
 Kahllella acrobates. 3888

Morphogenesis, contd.

- microtubular organelle in *Nassula*. 3892
Ochromonas capsule. 19
Paramecium trichium. 102
 reversible effects of antimitotic agents, *Condyloma magnum*. 5836
Scenedesmus. 3243

Morphology,

- abnormalities in *Dendrophysa hooghiensis*. 7601
 abnormality frequency, estuarine fishes, Georgia. 8862
Acipenser, Aral Sea and Lake Balkhash. 9022
 acoustic organ, *Delphinus delphis*, Tursiops. 8830
Acrothoracica. 4016
 adaptation for oxygen deficient waters, Pisces. 7394
 adaptation to mechanical damage, *Batrachospermum*, Brazil. 8380
Alepocephaloidea. 5230
 algae, Pakistan. 8326
Ambystoma mutant, Florida. 7948
Artemia salina. 3980
Ascomycetes, New England. 8419
Belostoma indicum, digestive system. 1950
Carditacea. 7878
Caulochytrium gloeosporii. 601
 cells, fish extraocular muscles. 3702
 cells, *Procambarus clarkii*. 4966
Ceratium hirundinella. 8394
Chlamydomonas. 1041
Chrosomus erythrogaster and *C. eos*. 867
Chrysomeridae. 3215
 CNS, *Macoma balthica*. 257
 coral reefs, Tuléar. 3326
Corallinaceae. 3841
Corynosoma hamanni, trunk. 3949
Cristivomer, Lake Superior. 4316
Crucibranchia macrochira. 7858
 developmental, *Melobesia mediocris*. 4714
 diagnosis of European spp of *Eubranchius*. 722
Dictyocha fibula, culture. 4625
 differences between *Pleurodema*, *Physalaemus*. 6234
 differentiation, Cyprinion, Iraq. 7315
 differentiation, thallus, *Batrachospermum*. 3264
 digestive organs, *Rhynchobdella aculeata*. 6585
 digestive system, *Bufo melanostictus*. 6219
 digestive tract epithelium, *Phoronis vancouverensis*. 6196
Donax denticulatus. 252
 effect of 2,4-D, *Poterochromonas stipitata*. 6745
Ensoidens ingallsianus, *Scabies crispata*, Thailand. 4150
Euglena acus, New Zealand sewage treatment ponds. 4734
 fibrous proteins, Reptilia. 8005
 filamentous state and phylogeny, Cyanophyta. 8292
Fimbria fimbriata. 8673
 fish, effect on selectivity of gillnets. 3575
 fish epidermis. 3047
Gelidium caulacanthum. 5743
Gobio gobio, Poland. 6463
Haemopsis sanguisuga. 6925
Hantzschia. 5674
 head, *Perca fluviatilis*. 2283
Hormophysa triquetra. 8375
Hyalinoecia, North Atlantic. 5938
 integumentary tissue, *Orconectes limosus* during moulting cycle. 6977
 irregularities, *Sardinella longiceps*. 4349
 Kupffer's vesicle, *Pleuronectes*, *Gadus*. 6581
 larvae, *Anguilla marmorata*, Yaku Island. 6546
 larvae, Gastropoda, Banyuls-sur-Mer. 4112
 larvae, *Oncorhynchus* spp, Uchiura Bay. 8913
Lebistes, stability of traits. 1642
 liberation tube, *Caulerpa*, Oki Islands. 3229
 life history, *Apistonema*. 4620
 malformation, landlocked *Salmo salar*, Newfoundland. 4340
Metaingolfiellidae. 4056
 modification, *Acetabularia mediterranea*. 3223
 morphometry, *Prionotus stephanophrys*, Columbia River. 3668
Nemapterois biocellatus, Indian Ocean. 6507
 neoblasts, Planaria. 8485
 neuroendocrine organs, *Helisoma tenue*. 3455
 Neurymenia. 5748
 normal pore system, Ostracoda. 6998
Oligotrichida. 3889
Orchestia gammarella, structure of gnathopods. 4061
Ovalipes spp, stridulatory structures. 4062
 oviduct and egg-jelly layers, *Rana pipiens*. 8770
 palp, *Physa acuta*. 5010
Paracanthopterygii. 5205
Penaeus spp, North America. 6043
Percis japonicus. 8855
 Phaeophyta, Tanzania. 3254
 photomorphogenesis, *Nostoc communis*. 5636
 pineal organ, *Clarias lazera*. 7310
 planktonic Foraminifera. 5838
Portunus euglyptus. 8577
Prasiola stipitata. 8362
 psammophilic ciliates, Caspian Sea. 86
Pseudopythina rugifera. 263
Pterosiphonia spinifera var. *robusta*, Marseilles. 7543
 Recent coral reefs. 6888
 regenerating optic neurons, *Carassius auratus*. 8940
 regionation and terminology of pogonophoran body. 758
 rhizoids, *Polysiphonia lanosa*. 4716
Sagartia troglodytes. 1851
 salamander oocytes. 7201
Sarritor frenatus. 8855
Scorpaenodes, Indian Ocean. 4428
 shell, Diatomaceae. 5643
 shell variability, *Polygyra dorfeuilliana*, USA. 7870
Sipunculus spp. 8538
 skull, *Histiophoca fasciata*. 7217
Sphaeriodiothrix compressa. 8323
Spyridia filamentosa. 589
 stomach, *Asellus*, Jaera. 177
Tetrasporidium. 7525
Thalassia testudinum flower. 84
Theragra chalcogramma, Japan. 8152
Thunnus alalunga, North and South Hemispheres. 7382
Trematocarpus dichotomus. 1804
 trophont, *Erythropsis pavillardi*. 7635
 trunk limbs, *Alonella*, Dunhevedia. 664
Turaniella vitrea. 8458
 uncoiling in *Vermicularia*. 240
 variability, *Anacystis nidulans*. 3200
 variability, *Binulcearia*. 3228
 variability, culture, *Stichococcus*. 6774
 variability, *Stichococcus*. 4696
 variability, temperature induced, *Scenedesmus*, *Chlorella*. 3242
 variation, *Fundulus* spp. 5448
 variation in alimentary canal, *Gobiidae*. 8991

Morphology, contd.

variation, *Pungitius pungitius*, Mogami Basin. 5469
vascular bundles of stamens, *Victoria amazonica*. 3873

Vinciguerria numbaria, Japan. 4355
viviparity adaptations, *Viviparus viviparus*. 7056

Mortality,

Clupea harengus, pesticides, Canada. 9096
Corregonus artedii, Lake Michigan. 6387
culture mussels, Wadden Sea. 2009
Dursban pollution. 6654
Ephemerella rotunda, at dissolved-oxygen concentrations. 1698
Esox lucius, Lake Windermere. 4318
fish, antimycin in oligotrophic lake. 5308
graphical estimation. 4559
grey seals, Cornwall. 2913
infections, *Pimephales promelas*. 7339
lead pollution. 3748
Mirounga, Zalophus, San Miguel Islands. 8834
murres, California. 3545
Noctiluca blooming, St. Lucia. 7561
oxygen deficiency, New Jersey wrecks. 5399
oyster culture, Long Island Sound. 6136
Physeter catodon, South Africa. 4266
phytoplankton blooms, Alabama. 3574
pollution, Pisces. 7451
rates, in winter, *Pseudopleuronectes americanus*. 2332
serum lipids, *Oncorhynchus gorboscha*. 3615
swim bladder disease, *Cyprinus carpio*. 3639
tin pollution. 3749

Morulus chrysophakedion, epidermal organs of heads. 4377

Motella. 5221

Motemigonus crysoleucas, karyological analysis. 879

Motoneurons, excitatory and inhibitory, in the CNS of the leech. 660

Mougeotia,

chloroplast movement in blue light. 2517
life cycles, ontogeny of single cells. 4686
microtubuli. 7520
phytochrome dichroism. 7521

Moulting,

active transport and sodium fluxes in *Gammarus*. 1246

cell changes, *Procambarus clarkii*. 4966
Crangon crangon. 184
effect of aldosterone, frog. 7180
effect of phytoecdysones, *Procambarus clarkii*. 4968
effect of plant growth hormones, *Procambarus*. 4967

Homarus, serum protein changes during. 690
Jasus lalandii. 193, 4939

Paratelphusa, protein metabolism and. 4067

Moulting hormones, effects, *Sesarma*. 6992

Mountain lakes, Colorado. 2387

Mounting, plankton in agar. 3064

Mourera fluviatilis. 4781

Mouth parts, of *Hippolyte inermis* larva. 1249

Movement,

blackfly larvae, on threads. 6071
Crucibulum spinosum. 1982
drift, lotic environment. 8236
efferent influence on vestibular organs, *Carassius auratus*. 7303
leaping in *Bivalvia*. 2004
tide-associated, in *Penaeus duorarum*. 2679

Moxostoma sp. 5565

Mucopolysaccharides, in epididymis of *Hirudinaria granulosa*. 141

Mucosubstances, *Mercenaria mercenaria*. 2012

Mucus,

cell response to chloride-and sulphate-enriched media, gills, *Gambusia*, *Catla*. 6560
histochemistry, *Anguilla japonica*. 5431

Muggiaea kochi, 3930

Mugil. 5221, 6371, 7270

biology, Armorican Massif. 4464
chemoreception in lateral-line systems. 812
effect of salinity on pituitary. 9036
reproduction and endocrinology. 3042

Mugil auratus. 6568, 7267

Mugil brasiliensis, biometry, Brazil. 6569

Mugil capito. 6568

Mugil cephalus. 5268, 7270, 7375, 8210, 8854, 8879.

alkoxylipids and wax esters, eggs. 8209
aquaculture, Dead Sea. 3569
aquaculture, UAR. 3695
changes in swimbladder gas composition during hypoxia. 9037
distribution, Gulf of California. 7406
haematology. 3664
parasitism by *Stellantchasmus falcatus*. 6910
polyunsaturated alcohols in wax esters of roe. 443
prevention of deterioration, fillets. 3694
spawning, Kochi Prefecture. 2324
use of dextran blue for estimating intestinal water volume. 9018

Mugil corsula, morphology and physiology, alimentary organs. 7405

Mugil curema,

biometrics. 935
haematology. 936

Mugil saliens. 7267

Mugil waigensis, parasitism by *Myxosoma intestinalis* sp.n., India. 5843

Mugilidae, artificial feeding. 6568

Mulinia lateralis, embryo and larvae survival aptitude. 7889

Mullus surmuletus. 5163

Munida. 8557

Munida elegantissima. 8558

Munida heteracantha. 8559

Munida scabra. 8559

Munida tenuimana, host to *Nectonema munidae*. 696

Munidopsis trifida tomentosa. 8559

Muraenesox. 6371

Muraenesox telabon. 7343

Muraenidae. 7663

Murein, role in trichome breakage of *Microcoleus vaginatus*. 1753

Murex. 5863

Murex lotorium,

L.1758, request for validation. 726
taxonomy. 7048

Murex radix, Gmelin (1791), designated type-sp of *Muricanthus*. 728

Murex trunculus. 8856

Muricanthus, Swainson, type sp. 728

Murrayonidae. 6870

Muscle aldolase,

crystallization, *Esox*. 6398
pike. 392

Muscle AMP-aminohydrolase from carp. 405

Muscle esterase, *Clupea*. 824

Muscles,

- abdominal, *Pagurus pollicarus*. 1927-1929
 actinomyosin preparation, *Cyprinus*. 6457
 adductor muscle, *Anodonta cygnea*. 7070
 alanylhistidine, snake and dolphin. 5153
 Branchiostoma, electrical and mechanical properties. 5064
 calcium efflux. 6243
 calcium localization, frog. 7992
 Caranx spp. 6006
 carnosine in Delphinus, Parathunnus and Balaenoptera. 788
 catch muscle, *Anodonta cygnea*. 7066
 catch muscle, peak tension and ATPase activity in glycerinated adductor. 744
 depolarization, frog. 6240
 desensitization to ACH, muscle fibres. 7185
 development of lateral musculature. 864
 effect of different inhibitors of the sarcoplasmic reticulum. 5120
 effect of interrenals on carbohydrate metabolism, *Rana temporaria*. 5116
 effect of nicotine and compounds, *Rana pipiens*. 7177
 effect of PAM, rectus abdominis, frog. 7193
 effect of severing the opercularis on body orientation in *Rana*. 768
 effect of toxins, frog. 7190
 electrical and mechanical properties, *Paralithodes camtschatica*. 4065
 electromechanical coupling, radula protractor, *Buscyon canaliculatum*. 7853
 evolution, Hemichordata. 8725
 eye muscles, *Argyropelecus*, *Boleophthalmus*. 8899
 eye muscles, cod, burbot. 422
 eye muscles, *Periophthalmus*, *Chauliodus*. 6512
 fibres, frog. 8793
 fish extraocular, anionic binding of ruthenium red. 3703
 foot musculature of *Aplysia punctata*. 227
 fragmentation, effect of storage condition and muscle cathepsin. 3577
 freeze-etch study, *Molliensia* sp. 5456
 frog. 8794
 frog, capacitance of sartorius muscle fibres. 2078
 frog, sartorius muscle fibres, ionic conductances. 2079
 frog skeletal, anion permeability. 2083
 frog stomach, sodium flux. 2084
 glycogen and lactate, denervated, *Rana hexadactyla*. 7169
 histo-enzymological investigations in Octopus. 272
 hyperpolarization. 6244
 hypoxanthine as potential quality index in Microgogon and leiostomus. 900
 immunochemistry of phosphagen kinases. 5609
 initiation of nerve impulses, frog. 7972
 intracellular site of calcium activation. 6242
 isometric contraction, *Limulus*. 8635
 K and Cl conductances in giant barnacle. 1897
 kinetics, activation, frog. 6235
 latency relaxation nature, frog. 7971
 lipolytic activity toward long-chain triglycerides in *Salmo*. 849
 mackerel, aseptic autolysis. 2286
 myodome, Cichlidae. 428
 myodome, *Coregonus lavaretus maraena*. 364
 myofibrillogenesis, vertebrates. 6427
 myogenesis. 3947
 myoglobins of *Mercenaria mercenaria*. 2011
 myoneural junctions, transmission, frog. 7192
 neuromuscular junction, post-tetanic potentiation in frog. 770
 NMR resonance, sodium, *Rana catesbeiana*. 8763
 nucleotide degeneration when frozen in *Xiphias*. 450
 pace-maker activity, atrial, frog. 6237
Perinereis cultrifera. 4879
 permeability of *Balanus* muscle cells to non-electrolytes. 169
 pharyngeal bulb, *Perinereis cultrifera*. 4880
 physiology, *Branchiostoma*. 3500
 Polychaeta, benthos. 8522
 post-tetanic potentiation at NMJ, frog. 7183
 potentiation of potentials, *Procambarus clarkii*. 3380
 protein. 7322
 protein study, myosin, *Cyprinus*. 6456
 radial spread of contraction, frog. 6236
 radula, *Buscyon canaliculatum*. 5003
 rapid contractions in *Calamactis praelongus*. 1165
 regeneration, *Siredon mexicanum*. 8780
 resting potential and electrical properties, slow, *Rana temporaria*. 7184
 series elastic components, frog. 8795
 skeletal muscle, effect of hypertonic solutions, frog. 7178
 spindle, effect of strychnine in bullfrog. 2087
 spindle response to change in length. 7186
 spirally-arranged subunits in the A-filaments of *Camptozoa*. 282
 thermo-resistance, *Littorina*, *Strongylocentrotus*, *Crenomytilus*. 8429
 thermostability when isolated in *Sebastes*. 446
 TMAO, TMA, DMA content, Pisces. 8849
 trunk, *Rhincalanus cornutus*. 5978
 ultrastructure, *Lampetra fluviatilis*. 6356
 ultrastructure, longitudinal abdomen, larvae, *Ecdyonurus*, *Baetis*. 7009
 variability in length, *Portunus*. 4078
 variability of myomere number, larvae, *Clupea*. 7272
 ventricula, *Buscyon canaliculatum*. 2783
 volume control, blue crab. 1941
 volume control in *Callinectes sapidus*. 1902
Musellifer sublitoralis, (*Chaetonotidae*) gen.et sp.n., Wash. 133
Mussels,
 growth and mortality in the Wadden Sea. 2009
 poisoning, South Africa. 2022
 resources, Tennessee River. 4153
Mustelus. 4270
Mustelus canis. 8483
 isolation of pepsinogens A, C and D. 808
 specialized basophilic cells in ventral lobe of pituitary. 355
Mutagenesis,
Anacystis. 2490
 Cyanophyceae, repair. 2491
Mutagens,
 diethyl sulphate, *Anacystis nidulans*. 4609
 effect of antimutagenic agents on cortical morphogenesis, *Condylostoma*. 5836
 effect of UV irradiation altering situs of viscera at gastrula and neurula stages, *Ambystoma mexicanum*. 5075
 ethyleneimine, *Chlorella*. 5717
Paramecium aurelia. 4812
Mutations,
 albinism, *Sphyrna lewini*. 8073
Anabaena, *Scenedesmus*, chlorophyll a. 8300

Mutations, contd.

- apolar embryos. *Fucus vesiculosus*. 4701
characteristics, *Agmenellum quadruplicatum*. 6735
Chlamydomonas, photosynthetic electron transport. 4652
Chlamydomonas reinhardtii, chemical composition of thylakoid membranes. 5702
Chlamydomonas reinhardtii, electron carriers. 4653
Chlamydomonas reinhardtii, membrane biosynthesis. 5701
chromosome aberration, *Chlamydomonas*. 3230
cytoplasmic inheritance of erythromycin resistance, *Paramecium aurelia*. 7641
effect of maleic hydrazide on *Anacystis nidulans*. 3795
growth characteristics, *Agmenellum*. 5631
Lebistes reticulatus. 4457
photosynthetic, *Scenedesmus*. 4682
pigment, induced, *Chlamydomonas reinhardtii*. 5703
process, *Chlorella*. 4689
protochlorophyllic, *Rhodospseudomonas palustris*. 4760
spontaneous, in *Artemia salina*. 147
Stomateus cinereus. 8185
taxonomy, *Mallomonas*. 5675
- Mya arenaria**. 7089
absorption of Diquat. 741
distribution, Black Sea. 6143
ecology, Black Sea. 5023
free amino acid composition, in relation to salinity. 4154
free amino acids, temperature effects. 4155
scavenging of ions. 6144
- Mycobacterium marinum**,
aquarium-borne infection. 4759
in tropical fish aquaria. 2550
- Mycocaster coypus**. 3559
- Mycophyceae**. 7428
- Mycosis**, in *Palaemonetes*. 195
- Mycteroperca**, responses to sounds, Bahamas. 4296
- Mycteroperca microlepis**, return of tag gag. 5403
- Mycteroperca rosacea**. 8041
- Myctophidae**. 7232
lipids. 937
predators, eastern Indian Ocean. 4306
- Myctophum**. 8039
- Myctophum asperum**. 7420
- Myiocheilus caurinus**, parasitism by *Edlintonia ptychocheila* gen. et sp.n., North America. 8500
- Myiodocipida**, distribution and new species, Philippine Islands. 4095
- Myodome**, Teleostei. 6376
- Myoglobins**,
adductor muscle, *Mercenaria mercenaria*. 2011
radular muscle, *Buccinum*. 719
- Myosin ATPase**, *Scylla serrata*. 4083
- Myosotis palustris**, distribution, Norway. 4794
- Myoxocephalus**, blood plasma pigment. 3666
- Myoxocephalus aeneus**, Newfoundland. 436
- Myoxocephalus scorpius**. 5404
- Myriactula gracilis** sp.n., French Mediterranean. 3839
- Myriophyllum**. 5523, 8137
chemical ecology. 5814
key. 4789
- Myriophyllum brasiliense**, effect of CO₂ on growth and development. 1133
- Myriophyllum spicatum**. 3710
- Myriotrichia**, culture from *Hecatonema* zooids. 1787
- Myripristis leiognathus**. 8041
- Mysidacea**. 6605, 7434, 7739
Bahamas and S. Florida. 694
benthos, Japan. 7743
distribution. 4072
ecology, Bahamas. 5998
Hokkaido, Japan. 3069
- Mysidae**, systematics, Baltic. 1259
- Mysidella**, keys. 7743
- Mysidopsis bahia** sp.n. 6963
Galveston Bay, Texas. 695
Texas. 4943
- Mysidopsis indica**, description of female. 4059
- Mysidopsis japonica** var. **vel** sp.n. 7743
- Mysidopsis surugae** sp.n. 7743
- Mysis relicta**,
embryonic behaviour. 1261
fungal decomposition and amino acid analysis. 1920
isoenzyme polymorphism. 1258
Lake Vansjö, Norway. 1260
tolerance of thermal shock and light. 6032
X-organ and sinus gland. 2656
- Mystidens**. 4270
- Mystus**. 7422
- Mystus vittatus**. 6903
- Mytilacea**, byssus amino acids. 7061
- Mytilaster lineatus**. 7431
- Mytilicola intestinalis**,
effect in *Mytilus edulis*. 5974
seasonal variations, biochemical composition. 8547
- Mytilicola orientalis**, fecundity. 670
- Mytilidae**, distribution, South West Africa coast. 6145
- Mytilina**. 7688
- Mytilus**. 3314, 7087
aquaculture. 8676
comparative study, muscle proteins, *Holothuria*. 5024
effect of salinity and temperature on larvae. 3469
fertilization, male pronucleus formation. 3468
fertilization, polar body formation. 3467
fouling of power station water. 9101
larvae from fragmented eggs. 7085
seasonal variations, in carotenoid content. 3470
- Mytilus californianus**,
carotenoid pigment. 2013
effect of light on growth rate. 742
- Mytilus edulis**. 6704, 7089, 7532, 9050.
accumulation of radiophosphorus. 8681
carotenoid pigment. 2013
effect of light on growth rate. 742
excitatory and inhibitory actions of acetylcholine on heart. 7881
excretion of acidic phosphatase, goblet-cells. 3482
freezing tolerance. 8678
infected with *Pinnotheres pisum*. 202
influence of thermal acclimation on oxygen consumption and temperature. 7867
Ireland. 8679
light microscopy of byssus retractor paramyosin. 8677
microcinematography of ciliary movement. 7086
parasitism by *Mytilicola intestinalis*. 5974
physiological consequences of lab culture. 6147
prismatic region and boring. 2798
spermatozoa, electrophoretic mobility. 5025
synchronal coordination of compound cilium of gills. 2014
- Mytilus galloprovincialis**. 7468
isolation of human enterovirus. 743
loss of Zn⁶⁵. 2797

- Mytilus galloprovincialis**, contd.
sodium metabolism. 4051
uptake of zinc. 4156
- Myxicola**,
current separations in giant axons. 5940
effect of tetrodotoxin on giant axons. 5939
leak current rectification in giant axons. 5941
- Myxilla iotrochotina**. 3904
- Myxilla rosacea**. 3904
- Myxine glutinosa**,
amino acid and osmoregulation. 5200
distribution and ecology. 2939
electron microscopy of cardiac tissue. 806
presence of corticosteroids. 5201
responses to adjuvant injection. 7254
- Myxobolus**, parasite of piranha fish, Brazil. 5842
- Myxobolus argenteus sp.n.**, parasitic on golden shiner. 2572
- Myxobolus grandis sp.n.** 6836
- Myxobolus marginatus**. 6836
- Myxobolus serrasalmi**. 5842
- Myxocephalus quadricornis**, roe colour, environmental determination. 4418
- Myxodagnus belone sp.n.**, from Bahamas and Puerto Rico. 888
- Myxomycetale**, cause of meningo-encephalitis. 3863
- Myxophyceae**. 5618
Symphyonemopsis katniensis gen.et sp.n. 532
- Myxosoma intestinalis sp.n.**, parasite in estuarine fish Mugil waigensis, India. 5843
- N**
- Naccaria wigglia**, occurrence of tetraspores in life history. 4715
- NADP isocitrate**, genetics, Paramecium. 3320
- Naididae**. 4512
- Nais bretscheri**. 6929
- Nais pseudoobtusata**,
asexual reproduction. 3966
electron microscope studies. 3966
- Naja haje**. 6721
- Najadatum marinae**. 4776
- Na-K-ATPase**, epidermis, Rana. 3514
- Nalbantichthys**, colouration. 8855
- Nalidixic acid**, effect on plastids, Euglena. 8399
- Nandus nandus**, cephalic sensory canals. 437
- Nangra viridescens**, parasites. 3335
- Nannocalanus minor**, nutrition, Guinea Bay. 8548
- Nannoniscus hanseni sp.n.**, Greenland. 7739
- Nannoplankton**,
calcareous, bibliography. 7424
distribution, Otway Basin. 7423
Neogene, zonation. 2348
zonation, Palaeogene. 8218
- Nanophyetus salmincola**, histochemistry of cell wall. 8505
- Nasitrema**, parasite of Cetacea. 5906
- Naso brachycentron**, distribution, Laccadives. 4303
- Nassarius**, factors affecting larval growth. 6120
- Nassarius reticulatus**, feeding activity. 6119
- Nassellaria**, relation to other Radiolaria. 6854
- Nassichuk gen.n.** 6154
- Nassula**, morphogenesis of microtubular organelle. 3892
- Nassula ornata**. 6831
- Natal**, sewage pollution along the coast. 504
- Natica alderi**. 4023
- Naticidae**, Japan, taxonomy. 1991
- Natrix**,
Mexico. 6298
temperature acclimation, effects on physiological responses. 8813
transport of urate and PAH. 8010
- Natrix cyclopion**,
adrenal-renal function. 3541
saline loading and aldosterone. 3540
- Natrix dunni sp.n.**, Malaysia. 781
- Natrix sipedon**, renal function. 3534
- Natrix tessellata**, synonymy and variability. 782
- Naucoridae**. 3729
- Naucoris**. 8607
- Naupliicola kaunasiensis sp.n.**, Lithuania. 6857
- Naupliicola lituanicus**, parasites, Lithuania. 6856
- Naupliicola vilniensis sp.n.**, Lithuania. 6857
- Nauplius**,
Balanus balanoides. 171
ultrastructure of eye, Sapphirina. 163
- Nautilus**, ultrastructure, sense organs. 3491
- Navanax inermis**, electrical transmission among neurons in buccal ganglion. 6121
- Navicula**. 4508, 5660, 6742, 8229
- Navicula falsalyra sp.n.** 5651
- Navicula grevillei**. 6784
epiphyte, Nereocystis luetkeana, Washington. 6784
- Navicula kuwaitiana sp.n.** 5651
- Navicula lyratae**. 5651
- Navicula ostrearia**, effect of hydrocarbons and lipoproteins on pigmentation. 541
- Navicula pavillardi**. 3338
- Navicula ponticula sp.n.** 5656
- Navicula pseudoincerta sp.n.** 5656
- Navicula spinifera sp.n.** 5660
- Navicula subirritans sp.n.** 5656
- Navicula zanzibarica var. zebuana f. sumatrana new form**. 7495
- Neanthes arenaceodentata**, influence of age on uptake of glycine- C^{14} . 654
- Neanthes diversicolor**. 9069
- Nearctic region**, Chironomidae, distribution. 3423
- Near East**,
diseases in parasites of fish in warm-water ponds. 3571
weed control in fish ponds. 3559
- Neascus hepatica sp.n.**, parasite in Xenetodon cancella. 8506
- Nebularia abbatis**, Japan. 2015
- Nechamandra**. 8233
- Necrotic factor**, of Aeromonas liquefaciens for eel. 1096
- Nectonema munidae**, parasite of Munida tenuimana. 696
- Nectophrynoides occidentalis**,
gestation maintenance, Africa. 5091
modification influence of progesterone on embryos. 5092
- Nectothuria translucida gen.et sp.n.**, (Holothuria), Kurilo-Kamchatka trench. 7115
- Necturus**, photoreceptor resistance changes. 2874
- Necturus maculosus**. 4224, 6223, 8783
- Negaprion**. 4270
distribution, Georgia. 4295
- Negaprion brevirostris**,
osmotic regulation and urea metabolism. 356

- Negaprion brevirostris**, contd.
 response to waterborne drugs. 3599
- Negomphoides**. 7001
- Nekton**, drop-net for sampling. 4481
- Nemacheilus**, informosomes, embryos. 8118
- Nemalionaceae**, review of life-histories. 65
- Nemalion multifidum**, sporophyte, Swedish coast. 8385
- Nematobothrium texomensis**, in *Ictalurus* spp. 2591
- Nematochrysopeis hieroglyphica**, culture. 2498
- Nematochrysopeis roscoffensis**, culture. 2498
- Nematocysts**,
 Chrysaora, chemical composition. 634
 differentiation in Hydra. 1166
- Nematoda**. 7438, 8117, 8179, 8439, 8488.
 Chad. 7693
 distribution, River Po. 4861
 dormancy and survival aptitudes. 7691
 excretion of glycerol. 1866
 free-living, from North Sea mud flats and salt marshes. 1189
 from freshwater fish, Sudan. 124
 from gill chambers of *Monohystrium inquilinus* sp.n. 1190
 host-parasite relationships. 7700
 lotic environment, India. 6916
 marine, assimilation of glucose. 1187
 marine-limnetic boundary, Colombia. 7689
 marine spp, Canada. 130
 new species, Exe estuary. 5921
 Northumberland, West coast. 2597
 parasitism of *Culex pipiens* larvae. 7008
 population study, drying beds. 8516
 taxonomy. 7694
 wastewater treatment plant. 3148
- Nematopagurus**, Red Sea. 4022
- Nematoplane nigrocapitula**, chorda intestinalis. 5907
- Nematoscelis difficilis**, California. 6033
- Nemertea**. 8241
- Nemichthys scolopaceus**. 5163
- Nemisis** spp. 5975
- Neomphitrite figulus**, chromatographic analysis of peritrophic membrane. 8531
- Neoblasts**, so-called, in *Spirobrbis*. 658
- Neocamallanus vachaii**, from *Eutrotropichthys vacha*. 134
- Neoceratodus**, visual cells. 4474
- Neoceratodus forsteri**, haematology. 938
- Neochanna**. 8193
- Neodactylogyrus tetra radiatus** sp.n., parasite of *Clupea harengus*, India. 8481
- Neoechinorhynchus africanus** sp.n. 7692
- Neoechinorhynchus rutili**. 5913
- Neoechinorhynchus saginatus**, life history and larval development. 5931
- Neogoniolithon mammosum**. 6631
- Neolaeops** gen.n. 7412
- Neomerinthe**. 5412
- Neomeris phocaenoides**, oil, fatty acids. 2905
- Neomysis awatschensis**, Sacramento-San Joaquin River estuary. 1262
- Neomysis intermedia**. 6625
- Neomysis rayii**, body nitrogen and nitrogen excretion. 1921
- Neomysis vulgaris**, effect of $HgNO_3$. 2644
- Neopilina**, distribution, South Atlantic Sea. 4173
- Neoplasms**,
 and related disorders, *Torpedo californica* lesions. 4301
 Hydra. 3925
- supernumerary heads in *Hydra viridis*. 3926
- Neoscopelus**. 8039
- Neoscopelus porosus** sp.n., Suruga Bay, Japan. 2325
- Neotriakis**. 4270
- Nepa**. 8607
- Nephropides caribaeus** gen.et sp.n., from the Caribbean. 1263
- Nephridia**, iodine accumulation in *Sipunculus*. 1199
- Nephrops**. 4915, 7749
- Nephrops andamanicus**, ecology. 3414
- Nephrops norvegicus**, Gulf of Gascony, biology. 697
- Nephtys**. 7440
 infracerebral glands. 8532
- Nephtys incisa**, role of supra-oesophageal ganglion in response to hydrostatic pressure. 655
- Neptunea antiqua**. 4023
- Neptunea arthritica**, lipids. 3445
- Neptunea ennae** sp.n., Japan. 1992
- Nereidae**,
 distribution on Livorno Coast. 3969
 swimming mechanisms. 6920
- Nereis**. 3969
- Nereis caudata**. 3969
- Nereis diversicolor**. 3969, 9070
 accumulation of DDT- ^{14}C . 1202
 anomalies of regenerated cirri. 6930
 chloride regulation. 7706
 endocrine activity. 3968
 habituation of withdrawal response. 656
 hypo-osmotic urine. 7707
 iodine metabolism. 8533
 osmoregulation. 7705, 8534
 water fluxes and apparent permeability to water. 7706
- Nereis japonica**. 6625
 collagen. 3348
- Nereis neogracilis** sp.n., Arabian Gulf. 8535
- Nereis pelagica**, secondary sexual characters. 4876
- Nereis succinea**. 3969, 6926
- Nereocystis luetkeana**. 6728
 ecology. 8377
- Nerilla**, distribution, South Africa. 5942
- Nerilla antennata**, temperature and salinity effect on reproductive behaviour. 3970
- Nerocila maculata**, cuticle. 4060
- Nervous system**,
 ablation, effect of feeding behaviour, *Panulirus argus*. 4957
 accommodation in frog neurons. 2077
 anaesthetic effect, frog. 7976
 Aplysia, cholinergic neuron. 2782
 Asterias rubens, electrophysiology. 4180
 binocular neurons, frog optic tectum. 7966
 biogenic amine receptors in toad sciatic nerves. 2088
 brain stem afferents from spinal cord, Amphibia. 7174
 bullfrog, sympathetic ganglion cells, calcium and action potentials. 2082
 cardioinhibitor, of *Limulus*. 220
 cardio regulatory nerves, *Limulus polyphemus*. 8637
 central nervous control of gill movements in *Aplysia*. 1975
 cephalic sensory canals, *Nandus nandus*. 437
 Cetacea and pluripyletic origin. 4356
 characterization of membrane fractions, *Dosidicus gigas*. 5034
 chromatophoric activity, *Asterias amurensis*. 5043
 circumoesophageal nerves, Decapoda. 4911
 CNS, excitatory and inhibitory motoneurons in the leech. 660

Nervous system, contd.

- CNS, *Macoma balthica*. 257
 coordination, *Gadus morhua*. 5378
 coordination, pedal-disc detachment in *Callinectes parasitica*. 1164
 components of optic nerve, *Carcinus maenas*. 4035
 degeneration and regeneration of abdominal flexor motor neurons, *Procambarus clarkii*. 4968
 desensitization to ACh in muscle fibres, *Rana temporaria*. 7185
 detector properties of ganglion cells, *Esox*. 6400
 development, *Niphargus virei*. 6976
 differentiation of neurosensory cells in *Hydra*. 3927
 direct neuronal pathways in *Anodonta cygnea*. 244
 DNA biosynthesis in giant neurons, *Tritonia diomedea*. 6127
 ecological factors affecting sensitivity, interneurone, crayfish. 6990
 effect of anaesthetics, frog. 7188
 effect of external K on inactivation of Na currents in squid giant axon. 2029
 effect of extirpation on leucine incorporation, *Littorina littorea*. 7041
 effect of *Periplaneta* neurohormone D on visceral ganglion, *Lymnaea stagnalis*. 7047
 effect of temperature change on membrane potential and conductance, giant nerve cell, *Aplysia*. 8648
 effect of tetrodotoxin, *Loligo pealei*. 7099
 effect of tetrodotoxin on presynaptic terminals, *Loligo vulgaris*. 7100
 effect of toxins on NMJ, frog. 7190
 effect of venom on NMJ, *Rana*. 3515, 3516
 efferent pathways of optic tectum of frog. 314
 electrical activity, *Anodonta cygnea*. 4139, 7072
 electrical activity of neurons, crayfish. 5994
 electrical transmission, *Navanax inermis*. 6121
 electrocardiogram of *Tursiops truncatus*. 4268
 elements in adductor muscle, *Anodonta cygnea*. 7070
 endocrine organs, ultrastructure, *Helisoma*. 3455
 extra-hypothalamic neurones, brain, *Tilapia mossambica*. 7372
 extraventricular mitoses. 7198
 foot-withdrawal reflex, *Ensis directus*. 7079, 7080
 free amino acids, *Bufo regularis*. 7155
 frequency-dependence of action potential, *Anodonta cygnea*. 7065
 frequency sensitivity, neurons, *Caiman crocodilus*. 5142
 frog, inhibitory interaction between motoneurons. 6288
 frog sartorius muscle fibres without transverse tubules. 2080
 frog skin. 2081
 function of thoracic ganglion of *Procambarus*. 1271
 functional organization of invertebrate ganglia. 8427
 GABA, inhibitor, lobster. 8566
 giant axon, ammonium ion currents in squid. 2028
 giant axon, *Todarodes sagittatus*. 7104
 giant neurons, *Aplysia*. 1976
 giant squid axons, protease effects. 2818
 heart ganglion, inhibitory synapses on pacemaker neurons in *Squilla oratoria*. 1943
 5HTP-DOPA decarboxylase, *Anodonta cygnea*. 7063
 identified cells, *Lymnaea stagnalis*. 7044
 inhibitory miniature potentials in stretch receptor neurons of crayfish. 1942
 innervation, cephalic tentacles, prosobranchia. 3457
 innervation of genital duct, *Asterina gibbosa*. 7110
 innervation of receptors at nerve joints, *Homarus gammarus*. 7773
 integrative properties of a reflex motoneuron in brain of *Carcinus*. 685
 intersegmented reflexes of lobster swimmeret. 1250
 intracellular polarization of horizontal cells, effects on ganglion, retina, *Esox*. 6399
 intramesoglean nerves, *Veretillum cynomorium*. 7679
 isosmotic regulation, nerves, *Eriocheir sinensis*. 3393
 learning, *Octopus*. 5039
Ligia oceanica. 4941
 liquor cerebrosinalis, teleosts. 3008
 localization of succinic dehydrogenase activity, *Anodonta cygnea*. 7074
 make-and-break responses, *Anodonta*. 7064
 membrane potentials, neurones, *Aplysia*. 8649
Mercenaria, dopamine synthesis. 3466
 methylamphetamine action, *Brachydanio rerio*. 5231
 modification of flexion, *Xenopus laevis*. 8789
 Mollusca. 7051
 morphogenesis of cytosomes in neurones, *Anodonta cygnea*. 7073
 morphology of neurosecretory system, *Daphnia pulex*. 3984
Mytilus, synchronal coordination of gill cilium. 2014
 nerve activity, *Rana*. 4227
 nerve-cord, interacting with gut in sabellid regeneration. 657
 nerve fibre layer and neurocord structure, *Enteropneusta*. 4211
 nerve-muscle preparations, crustacean, uptake of γ -aminobutyric acid. 1926
 nervous tenuis, fourth metamere, Urodela. 7160
 neural patterns, ventilatory movements, larvae, *Zygoptera*. 3420
 neural substance as mechanisms of spawning, *Asterias amurensis*. 6170
 neuron analysis, frog. 6248
 neuron innervating heart, *Lymnaea stagnalis*. 8660
 neuron monoamines, *Planaria*. 3337
 neuron morphogenesis of cytosomes, *Anodonta*. 4140
 neuron RNA, *Aplysia*. 8651
 neuronal co-ordination of rhythmic maxilliped beating in Decapoda. 673
 neurophysiology, of respiration in decapods. 206
 neurosecretion, *Ictalurus* sp. 7332
 neurosecretion, *Lethocerus indicum*. 7010, 7831
 neurosecretion, seasonal changes of cells, *Harmothoe imbricata*. 140
 neurosecretion, sites of presumed activity, *Daphnia magna*. 149
 neurosecretory system, *Chirocephalus diaphanus*. 8541
 neurovenous tissues, Cephalopoda. 3488
 NMJ, frog, effects of nickel, uranyl and calcium ions. 309
 NMJ, frog, effects of saxitoxin and tetrodotoxin on. 320
 NMJ, post-tetanic potentiation in frog. 770
 NMJ, transfer function, frog. 7973
 notochord, *Rana catesbeiana*. 8762
 oculomotor neurons, fish. 2337
 odour discrimination after regeneration of olfactory pathways, *Carassius carassius*. 8951
 optic nerve, *Daphnia pulex*. 3985
 optic nerves, *Odonta*. 8618
 oscillation and repetitive firing in axons, squid. 6157
 parallel septa, *Procambarus clarkii*. 6047
 pathways, foot withdrawal reflex, *Ensis directus*. 7081

Nervous system, contd.

- permanence of postsynaptic specialization in sympathetic ganglion after denervation in frog. 315
- persistent initiation of impulses, muscle spindle, frog. 7972
- phenol effects, *Carassius auratus*. 8131
- Physa acuta*. 5010
- plasma membranes from retinal axons, squid. 7898
- post-tetanic potentiation at NMJ, frog. 7183
- potassium fluxes in dialysed squid axons. 2030
- potentials of isolated spinal cord, frog. 7189
- pre-optic nucleus and hypothalamic tracts of *Anguilla anguilla*. 453
- Rana ridibunda*. 6238
- rapid contraction and associated potentials in *Callinectes mactis praelongus*. 1165
- reflex control of muscles, cheliped, *Uca pugnax*. 6995
- reflex dynamics of lobster swimmeret. 1251
- regeneration of olfactory fibres, *Carassius auratus*. 8950
- regulation of behaviour, fish. 2918
- regulation of neuron composition in cerebellum cortex, sea urchin. 8709
- relation, limb regeneration, Amphibia. 8739
- resistance to tetrodotoxin, *Bufo marinus*. 7154
- rhythmogenesis in nerve fibre, *Eriphia spinifrons*. 6015
- sciatic nerve, effects of increased oxygen tension. 6245
- sensory deprivation, Pisces. 6382
- serotonergic nerve fibres, *Aplysia californica* heart. 6102
- significance of fluorescent neurones, *Hirudo medicinalis*. 8528
- slow conduction systems in *Callinectes parasitica*. 1163
- slow potential, epiphysis cerebri, fish. 2992
- slow potentials of *Limulus* eye. 1966
- sodium-calcium competition at frog myoneural junction. 2076
- spectral responses of sustaining fibres in optic tract, *Procambarus*. 8600
- sphingosine, *Procambarus clarkii*. 7803
- spinal cord and notochord, *Branchiostoma lanceolatum*. 4200
- spinal cord, effect of histamine in *Bufo marinus*. 2051
- spinal cord, esterases, *Cyprinus carpio*. 8139
- spinal cord, frog. 7975
- spinal cord transplant, *Triturus cristatus*. 2065
- spontaneous activity in cardioaccelerator, *Astacus pallipes*. 6960
- stationary ionic permeabilities of sensory and motor fibres in the frog. 310
- stimulation, *Anodonta cygnea*. 4141
- stomatogastric, *Homarus americanus*. 6972
- synaptic axoplasm, *Petromyzon marinus*. 8874
- synaptic current of *Loligo pealii* giant synapse. 2026
- synaptic structure of retina, *Octopus vulgaris*. 8695
- synaptic vesicles in Crustacea. 3978
- tail regeneration, *Dugesia lugubris*. 4858
- transmission failure, habituation, *Loligo*. 3487
- transmitter, pigment effect, *Fundulus*. 3689
- transmitter release at neuromuscular junction. 8561
- Triturus viridescens*, jaw regeneration. 2861
- Tunicata. 2044
- ultrastructure, *Hirudo medicinalis*. 3346
- ultrastructure, *Lota lota*. 3653

- ultrastructure, *Orconectes virilis*. 3407
- velocity function of the movement detecting class-2 neurons in frog retina. 322
- visceral ganglion, *Aplysia*. 5000

Nets,

- behaviour in relation to moving, *Penaeus japonicus*. 8595
- catch statistics, salmon, Pacific. 3610
- conical plankton nets. 3054
- depth-time sequential analysis, tuna purse seines. 3588
- gillnet. 3575
- gillnet selection, Lake Tanganyika. 6500
- materials, protection against microbial attack. 6346
- materials, resistance in current. 3578
- microbial damage. 6345
- netting twines properties. 3580
- plane minnow netting resistance to current. 3578
- plankton sampler. 5484
- salmon gill, dropping rate measurement. 3579
- salmon gillnet mesh selectivity. 3603
- selectivity, effects of shape and structure of fish. 3575
- stream insect drift nets. 1944
- trawl net system for continuous gathering. 4273

Net spinning by *Hydropsyche instabilis*. 2718

Netherlands,

- Balanus amphitrite*. 3368
- Crustacea records. 3351
- Delta region, preventing blue-algal growth. 3199
- Haustorius arenarius* distribution. 3413
- Microphthalmus*. 143
- Rhine, Meuse and Scheldt estuaries, Dreissenidae. 2791

Neumania armata sp.n. 6091

Neurohypophysis, *Polypterus* and *Protopterus*. 2345

Neuroptera, Wadden Islands. 4978

Neurospora. 5716

Neurospora crassa, polyoxin D, inhibitor. 5804

Neurymenia, southern Japan. 5748

New Caledonia,

- corals. 3327
- Polycanthus senegalensis*, new record and *Polycanthus fulvus* sp.n. 3330

New classes,

- Eustigmatophyceae. 3218
- Sclerospongiae. 6871

New England, *Philine sinuata*. 234

New families,

- Dioecotaeniidae*. 5895
- Mattaspongiidae, Upper Devonian, Alberta. 5856
- Metaingolfiellidae. 4056
- Pelicaspongiidae, Upper Devonian, Alberta. 5856
- Piseinotecidae (Eolidacea), Tanzania. 7843
- Planodasyidae fam.n. (*Gastoricha*), India. 6913
- Protoraphidaceae. 5682

New genera, (see also New species),

- Acanthoclada*, New Zealand. 4824
- Acanthopagurus*. 4036
- Ehlersileanira*, (Polychaeta). 8530
- Elachistocythere*. 4093
- Emydura*. 3972
- Flagellamonas* (Astasiaceae), north east China. 7546
- Flagelloserranus* (Serranidae). 8989
- Goneplacidae*. 4045
- Habuprionovolva*. 4120
- Heterocyclopina*. 4007
- Hopperia*, France. 3951
- Kirchneriellostaccus* (Chlorococcales). 7519

New genera, contd.

- Leoblichopsis (Foraminifera) Barbados. 6834
 Litocorsa. 3959
 Marvinneyeria (Hirudinoidea). 6923
 Paguridae genera n. 7807
 Papiella. 8494
 Protolamelodiscus. 3940
 Protoraphis. 5682
 Pseudochlorococcum (Chlorophyceae). 8363
 Pseudohimantidium. 5682
 Rhaetomegalodon (Pelecypoda). 6151
 Romeis rivulorum, Europe. 6999
 Stratiopontotes. 4003
- ## New species. 5922
- Acanthacartia seshaiyai, Vellar Estuary, India. 5954
 Acanthobothrium, Virginia. 5883
 Acanthocephala, Chad. 7692
 Acartia bilobata, India. 3355
 Acestrorhynchini. 5316
 Achrochaetium godwardense, India. 7536
 Acomposcephalum tortum gen. et sp. n. (Cestoda)
 from Synodus intermedius, Bermuda. 8484
 Actinopterygii. 5229
 Actumnus similis, West Pacific. 8562
 Africophilus spp. n., Malawi, Nigeria. 8619
 algae, fossils. 3804
 algae, Washington. 6726
 Algites enteromorphoides, Missouri. 5691
 Alloglossidium hirudicola, from Haemopsis. 5884
 Ammonoidea, Permean, Canadian Arctic. 6154
 Amphipoda, Greenland. 7745
 Amphocleithrum paraguayensis gen. et sp. n. 4853
 Anaperus biaculeatus, sublittoral, White Sea. 8489
 Anchialina madagascariensis. 7755
 Anchoa walkeri, Pacific. 3604
 Ancistrumina nucellae. 4805
 Ankistrodesmaceae, Czechoslovakia. 8325
 Antarctosaccion (Chrysophyceae), Antarctic. 4674
 Antrocamptus spp. n., Pyrenees. 7725
 Apherusa alacris and Apherusa ruffoi, West Coast of
 Istria. 4029
 Aqualinderella fermentans. 4768
 Arctomyalina vokesi, Pennsylvanian, Arctic. 7075
 Ascidia celtica, British Isles. 7936
 Ascidiacea, Atlantic and Pacific. 7138
 Ascidiceae, Gulf of Gascogne. 7938
 Ascocotyle paratenuicollis. 3938
 Ascocotyle sexidigita, California. 8491
 Asellidae. 8568
 Asterocheres jeanyeatmanae, Chesapeake Bay. 5956
 Auchmeronema spp. n., Petropedetes, Africa. 4862
 Aulacodiscus. 5664
 bacteria, Baltic Sea. 3291
 Barbantus elongatus, Central Atlantic. 8900
 Bathylaco kreffti, Atlantic Ocean. 8901
 Benthopecton pikei, B. munidae, New Zealand. 4181
 Bivalvia, Cretaceous, South Dakota. 7874
 Bogidiella somala, Somalia. 5997
 Boldia angustata, Alabama. 4707
 Bomolochidae, Caribbean. 6943
 Bowmaniella spp. n., Bahamas. 6963
 Brachaluteres wolfei, Tasmania. 4293
 Brachinecta acanthopenes, India. 3352
 Brachiopoda, Miocene, Venezuela. 7929
 Briarosaccus tenellus, British Columbia. 6956
 Bryozoa, Antarctica. 6185
 Bryozoa (Ectoprocta) Hawaii. 4195
 Bucephalopsis, India. 3335
 Buliminella curta praesilviae subsp. n. 4807

- Buliminella mississippiensis. 4807
 Buliminella picaensis. 4807
 Calanoida, abyssal zone, Atlantic. 8544
 Calanoida, Massachusetts. 5953, 6940
 Calanoida, Pacific Ocean. 4888
 Calanoides philippinensis. 3991
 Caligus hobsoni, Pisces, California. 5965
 Caligule krishnai. 3993
 Calliblepharis jolyi, Brazil. 5738
 Campylaspis stephenseni, Greenland. 7740
 Candona, Sudan. 7000
 Carneophallus, Louisiana. 4854
 Caulerpa spathulata, Solomon islands. 8280
 Centropagidae, Australia. 3995
 Ceramiella comb. n., Puerto Rico. 4709
 Cercaria chackai, Kerala, India. 5886
 Cerviniopsis langi. 4003
 Cetitrema foliiformis, gen. et sp. n., liver of Balaen-
 optera brydei. 5887
 Cetomimus (Cetomimus). 4446
 Chaetosphaeridium. 4643
 Chlamydomonas archibaldii. 8338
 Chlamydomonas surtseyiensis. 8338
 Chloronia antillensis, Dominica. 8612
 Chondracanthinae. 5966, 5967
 Chondracanthus narium. 3996
 Choricotyle oregonensis, Parasite of Antimora
 rostrata. 5888
 Chrysophyceae, Indo China. 3213
 Chrysophyceae, south east Asia. 7495
 Chydorus tilhoi, Chad. 8539
 Chytriumyces annulatus, Douglas Lake. 5801
 Ciliata, White Sea. 7627
 Citharichthys spp. n., North Atlantic. 7388
 Clausophyes massiliana. 3921
 Cloacitrema philippinum, from Cerithium ornata,
 Philippine Islands. 5890
 Clostridium oceanicum, Atlantic sediments. 8413
 Cnemidocarpa squamata, Greenland. 7939
 Cobitis granoei olivai subsp. n., Mongolia. 6451
 Coelobothrium monodi, Iran. 7684
 Coelosphaera raphidifera, Barbados. 4825
 Coleoptera, Ceylon. 8613
 Colpidium kleini. 5835
 Constantina pulchra gen. et sp. n. (Trilobita), Devon-
 ian, Pennsylvania. 7133
 Copepoda, Australia. 4890
 Copepoda, parasites of Embiotocidae. 5968
 Corixidae, Netherlands Antilles. 7002
 Cribrillaria, Mediterranean. 4193
 crinoids, fossils, Virginia. 8702
 Crisitectus congeri gen. et sp. n. (Spiruridae),
 parasite of Conger vulgaris, Nantes. 8515
 Cryptonemia subdichotoma, Solomon islands. 8280
 Cyclostraca meltensis, Bulgaria. 8469
 Cyclopoida, Madagascar. 5966
 Cylindrobulla japonica, middle Japan. 4118
 Cymopolia, Pyrénées. 5720
 Dactylogyrus spp. n., India. 8481
 Dactylogyrus, South Africa. 6900
 Danielssenia, Stenelia, Bermuda. 3360
 Demospongiae, Barbados. 4825
 Dendrophyllia indica. 3922
 Derilissus spp. n., Western Atlantic. 4448
 Dermocystidium granulosum on Tetraodon palem-
 bangensis. 6812
 Derocheilocaris ingens, Maine. 4096
 Desmidaceae. 3817
 Diaptomus intermedius. 3999

New species, contd.

- Diaptomus intermedius*, Saskatchewan. 4896
 Diatomaceae. 5660
 Diatomaceae, Indian Ocean. 5665
 Diatomaceae, Kuwait. 5651
 Diatomaceae, South Africa, Lesotho. 5658
 Diatomaceae, South Africa littoral. 5656
Dicyemenea, New Zealand. 5927
Dicyemenea eltanini, Antarctic. 5928
 Didemnidae, Glenan Archipelago. 4208
Dinema spp.n., Lithuania. 6841
Dinema harpacticolens, Poland. 6842
Dinema mazuriense, parasite, Copepoda, Poland. 7547
Dinema metabolicum, Copepoda, Lithuania. 6843
Dinema symmetricum, parasites, Poland. 6845
Dinema unispicatum, *Dinema trakayense*, parasite, Lithuania. 6846
Dinemina ocelli gen. et sp.n., Lithuania. 6847
Dioecotaenia cancellata gen. et comb.n., parasite of *Rhinoptera bonasus*, Chesapeake Bay. 5895
Diogenella, West Indies. 7728
Discogasteroides australiensis sp.n. 5897
Discroerisma psilonerieiella gen. et sp.n. from British Columbia coast. 3842
Dugesia, Brazil. 6901
Dugesia indica, India. 3943
Dulichia rhabdoplastis, commensal. 3389
Echinogammarus, Switzerland, Italy. 3390
Ecnomus, Congo. 3424
Ecolsonia cutlerensis, Mexico. 5087
Edlintonia ptychocheila gen. et sp.n. (Cestoidea), parasites, North America. 8500
Flachistocythere merista, New Guinea. 4093
Elaphoidella rodriguensis, Rodriguez. 6947
Elaphoidella spp.n., Pyrenees. 7725
Emblemaria caldwelli, western Atlantic. 7355
Emblemariopsis spp.n., Western Atlantic. 7355
Emydura macquari. 3972
Enoplometus callistus, Gulf of Guinea. 7763
 Eolidacea, Tanzania. 7843
Eopelobates, Eocene, North America. 7159
Epistylis nigrellii, New York Harbour. 4020
Frgasilus cerastes, North America. 5971
Ergasilus cyprinaceus. 5970
Eucanuella reticulata. 4003
Euchirella acuta, Pacific Ocean. 4004
Eukrohnia minuta, Indian Seas. 7930
Eulimnogammarus toletanus, Spain. 7764
Euthalenessa. 7704
Eutima commensalis, India. 5868
Exanthemachrysis gayralii gen. et sp.n., France. 3219
Exhinocephalus diazi, parasite. 3340
 female, *Regalecus glesne*. 3700
Flagelloseranus danae. 8989
Flagelloseranus meteori. 8989
Foleyella confusa, parasite in *Rana limnocharis*, Manila. 8517
Forcipomyia. 6078
 freshwater shrimp, New Caledonia. 7750
 fungi, British Columbia. 6816
 Galatheidæ, Japan. 8557
Gambusia, Caribbean. 3690
Gammarus pecos, Texas. 4928
 Gastropoda; Eastern Pacific. 7040
Gastrosaccus spp.n., French coast. 7767
Gastrotheca bifasciata vellardi subsp.n. 6224
Geocentrophora cavernicola, Virginia. 5901
Glossanodon, Indian Ocean. 8898
Glossanodon struhsakeri, Hawaii. 8907
Glypthelminis hylereus, parasite in *Lymnaea* and *Hyla*. 5902
Glyptothorax jalalensis, Afghanistan. 8861
Gnorimosphaeroma salebrosa, Japan. 3412
 Gomphidae, South America. 7001
Gonatopsis, Japan Sea. 4169
 Goneplacidae. 4045
Grandierella dentimera. 6018
Grimatroctes oligolepis, southeast Atlantic. 8908
Gyrodactylus ambystomae from *Ambystoma macrodactylum*, California. 5903
Gyrodactylus aurorae from *Rana aurora*, California. 5903
Gyrodactylus cameroni, Newfoundland. 6549
Haliotis, Eastern Pacific. 7040
Halipegus phrynobatrachi. 3944
Halodule emarginata, Brazil. 7603
Hannaites quadria. 3814
Haplometroides eburnense. 3944
Hartmannella tahitiensis. 7078
Herpetocypris mateusorum, Portugal. 8606
Heterocyclopina vietnamensis, China Sea. 4007
Heteromysis, Caribbean Sea. 7770
Heteroptera, Netherlands Antilles. 7003
Heterosomata, Japan. 7412
Hippolyte leptometrae. 4049
Holacanthus venustus, Japan. 6499
Hydra graysoni. 3928
Hydracarina, India. 6092
Hydrachnellæ, Africa. 7018
Hyla lascinia, Venezuela. 5089
Hymenolepis albertensis, Canada. 8579
Hypsidoris farsonensis, Eocene, Wyoming. 7330
Icosiella hoogstraali, from *Rana macrodon*, Manila. 8517
Isonychia spp.n., Amur River. 7823
Isopoda, Portugal. 8552
Isorchis parvus gen. et sp.n., New Caledonia. 5880
Itararella gracilis gen. et sp.n., Carboniferous, Uruguay. 5855
Ixa holthuisi, northern Arabian Sea. 7775
Joyeuxiella guilhoni, parasite of *Zibethailurus serval*, Chad. 7682
Kapurdia bhargavai gen. et sp.n. (Centropomidae), Tertiary, Rajasthan. 7359
Kirchneriellostaccus lunatus gen. et sp.n. 3238, 7519
Kurenkovia magna gen. et sp.n. (Oligochaeta), Kamchatka. 6928
Labidocera pseudacuta, India Ocean. 4008
Lachtania dencyanna sp.n., New Mexico. 8626
 Lamellodiscinae. 3940
Lamellodiscus parisi. 3940
Latiremus eximius (Harpacticoida) gen. et sp.n., Réunion. 6949
Latirus varai, Cuba. 7864
Leandrites cyrtorhynchus, Japan. 4052
Lensia zenkevitchi, Atlantic. 8472
Lepidodidymocystis irwini gen. et sp.n., Menti-cirrus *Nasus*, Mexico. 4859
Lernaediscus crenatus, Tobago. 4021
Leucochloridium papillocirratum, parasite of *Rallus aquaticus*. 5905
Lightiella monniotae, New Caledonia. 5951
Limia caymanensis, Grand Cayman. 7401
Lioglyphostomella (*Drillia*) *timorensis*. 4123
Litocorsa stremma. 3959

New species, contd.

- Lysmata rathbunae*, North Atlantic. 7781
Macrociemys auffenbergi, Pliocene, Florida. 5145
Malapterurus microstoma. 3646
Mallomonas torquata group. 5676
Mastogloia lacazei, Arcachon Basin. 7498
Mattaspongia apaches gen. et sp.n., Upper Devonian, Alberta. 5856
Mayorella spp.n. 8449
Melobesioidea, Japan. 4706
Microhemidiscia ortmanni gen. et sp.n., Carboniferous, Uruguay. 5855
Microjanira dentifrons gen. et sp.n. (Paraselloidea), Bay of Naples. 7785
Micropsectra spp.n., Europe and North Africa. 8627
Microsiphona potamos gen. et sp.n. (Chrysophyceae), Ohio. 8316
Milosaurus mccordi, Pennsylvanian, Illinois. 6296
Mitra lopesi, Brazil. 5007
Mollusca, fossils, Dijon. 7019
Mononema perpendiculare, Lithuania. 6853
Montipora manualiensis from Gulf of Mannar. 3929
Myodocopida, Philippine Islands. 4095
Myriactula gracilis. 3839
Mysidacea, Bahamas. 6963
Mysidacea, Japan. 7743
Mysidopsis bahia, Texas. 4943
Myxosoma intestinalis, from estuarine *Mugil waigensis*, India. 5843
Nannoniscus hansenii, Greenland. 7739
Nasitrema. 5906
Naupliicola kaunasiensis, Lithuania. 6857
Naupliicola lituanicus, Lithuania. 6856
Naupliicola vilniensis, Lithuania. 6857
Neascus hepatica, parasite, *Zenetodon cancella*. 8506
Nectothuria translucida gen. et sp.n. (Holothuria) Kurilo-Kamchatka trench. 7115
Nematoda, Exe estuary. 5921
Nematoda, Linhomoeidae. 3952
Nematoda, parasites. 3340
Nematoda, Chad. 7693
Neodactylogyrus tetradius, Clupea harengus, India. 8481
Nereis neogracilis, Arabian Gulf. 8535
Nineo armoricana, Gulf of Gascony. 3971
Octocanna haeckeli. 3931
Ogmogaster grandis, from *Balaenoptera physalus*, Antarctic. 6904
Oligocephalus collettei, Ouachita River. 5394
Oncaea neobscura, Gulf of Lions. 4009
Ophryodendron hollandi, French Mediterranean. 7639
Opisthobranchia, southern tropical Pacific. 8642
Orchisprium heterovitellatum. 5909
Ostracoda, Puerto Rico. 4976
Paenodes, New Zealand. 5976
Paladilhia fabrianensis, springs, Ancona. 7023
Papiella otophalma comb.n. 8494
Paracaudina aspiculata, Manila Bay. 4176
Paracycloctyla cherbonnieri gen. et sp.n. (Platyhelminthes), British Isles coast. 7683
Paradisogaster manteri. 5897
Paramesacanthion, Northumberland. 5932
Parapilumnus, West Pacific. 8562
Parastacidae, Australia. 3391
Parastenocaris gertrudae, North Italy. 3997
Pareuglypha indica, India. 6833
Patriella vivipara, Tasmania. 4186
Pelicaspongia sterea, Upper Devonian, Alberta. 5856
Pellucidhaptor angularis, parasite, Illinois. 5879
Peloscolex aculeatus, Atlantic. 3349
Peloscolex dukei, Atlantic. 3349
Peltogaster aelanticus. 4022
Periclimenaeus, Great Barrier Reef and Australia. 4073
Periclimenes setoensis, Japan. 4052
Perinereis kuwaitensis. 8535
Phaenomonas cooperae, Gilbert Islands. 6373
Phaeostromatella elegans. 3840
Phenacovolva labroguttata, South Africa. 7052
Pherusa capitata. 3967
Philine exigua, Melanesia. 4130
Philonoglossa marcusii, British Solomon Islands. 4131
Phreodrilus tanganyikae, Africa. 4869
Phrygiopilus chuacusensis, Guatemala. 4962
Phyllogomphoides gen. et sp.n., South America. 7001
phytoplankton, Indian Ocean. 5490
phytoplankton, Ligurian Sea. 5489, 7426
Planodasys marginalis gen. et sp.n. (Gastrotirica), India. 6913
Platycheloniopsis planissimum, Congo Coast. 4075
Platysiphonia decumbens, Washington. 3272
Plectolaimus magdalenae (Leptolaimidae), Colombia. 7689
Polychaeta, Mediterranean. 4868
Polydora narica, California. 4881
Porifera, Jamaica. 3911, 6871
Porifera, Lake Moero. 6869
Portunidae, Tonkin Gulf and Hainan Island. 6985
Potamophloios, Luapula. 6869
Prosobranchia, bathyl, south East Asia. 7035
Proterogyrinus scheelei gen. et sp.n. (Anthraco-sauria), Carboniferous, Virginia. 7960
Protocryptochrysis gen. et spp.n. (Cryptomonadina), China. 7644
Prototransversotrema steri gen. et sp.n. (Digenea), from *Aldrichetta forsteri*, South Australia. 8511
Protozoa, Iceland. 3316
Protozoa, Ohio. 7623
Pruvotfolia pselliotes gen. et sp.n. (Nudibranchia), English Channel. 7872
Pseudamnicola klemmi, Spain. 7871
Pseudamnicola supercarinata, Balkans. 7053
Pseudanthessius spp.n., Madagascar. 8549
Pseudatractides pyriformis gen. et spp.n., India. 6091
Pseudonanemonia tentacula gen. et sp.n., New Zealand. 3280
Pseudobryopsis gracilis, Solomon Islands. 8280
Pseudobryopsis solomonensis, Solomon Islands. 8280
Pseudochirella verwoorti. 4005
Pseudochlorococcum polymorphum. 8363
Pseudochlorococcum typicum. 8363
Pseudodiaptomus jonesi, India. 5977
Pseudomesus sp, Greenland. 7739
Pseudomurraytrema, Alabama. 5914
Pseudomurraytrema paradoxum, Illinois. 5879
Pseudonycototherus corlissi gen. et sp.n. (Protozoa), symbiont, *Hyla versicolor*. 7623
Pseudopolydora kemi californica subsp.n. 4881
Pseudostomella plumosa. 5933
Pseudovermis mortoni, New Zealand and Solomon Islands. 4132
Pterycombus thynnulinus subsp.n. Guinea Gulf. 7370

New species, contd.

- Ralfsiaceae, California. 4699
Rana fasciculispina, Thailand. 8760
Rhabditis (Uniovaria) cranganorensis subgen. et sp.n., India. 6916
Rhaptapagis cantacuzenei gen. et sp.n., Roscoff. 5875
Rheocricotopus, Europe. 3430
Rhizidium tomiyamanum, Japan. 3306
Rhodella maculata gen. et sp.n. (Rhodophyceae). 4723
Rhodolachne decussata, Indian Ocean. 4725
Rimacephalus arecepta, Baikal. 6907
Rugoverticula mokurensis gen. et sp.n. (Isogomonidae), Afghanistan. 7893
Sabellacheres drachi. 3973
Salpingoeca spinifera sp.n., Arctic. 4747
Saprospira toviformis, New Zealand. 8416
Sardinella taiwanensis, Indo-Pacific. 4347
Scambicornus brachysetosus, Gulf of Mannar. 4011
Scambicornus sculptus from *Isostichopus badiotus*, Caribbean Sea. 6951
Schizoporella cochinchensis, Indian Sea. 7933
Scorpaenidae, Atlantic. 5412
Scorpaenodes tribulosus, Indian Ocean. 4428
Scyllarus subarctus, South Angola. 7805
Sebastapistes hassi, Maldives Islands. 6524
Serolis menziesi, Brazil. 7806
Sigara, Australia. 4979
Sipunculida, Pacific and Indian Oceans. 7137
Skrjabinosom exocoetidi (Trematoda), from *Exocoetidae*, Red Sea. 6909
Spelaodiaptomus rouchi gen. et sp.n. (Copepoda). 7732
Sphaerolaimus uncinatus sp.n., Deep Sea. 7699
Sphaerolana gen. et sp.n. (Isopoda), Mexico. 7808
Spinacopia spp.n. 4094
Spinitectoides berlandi. 3950
Spinitectus beaveri. 5935
Spirorbinae, West Indies. 6933
Spratticeps gaultinus gen. et sp.n. (Clupeiformes), Cretaceous, British Isles. 8897
Stagnicola bouilleti, Bavaria. 7042
Stellicola acanthasteris, *Acanthaster planci*, Eniwetok. 4899
Stenasellus, Somalia. 6049
Stephos spp.n., Bahamas. 6952
Stereoderma incerta, Spain. 7906
Sternapis capillata. 3976
Stomatopoda, Atlantic. 4904
Stomatopoda, Gulf of Tonkin. 3382
Stomatopoda, Madagascar. 7746
Stratiopontotes mediterranea. 4003
Strongylophora dendyi, Barbados. 4825
Stylaster brunneus, new Caledonia. 6896
Styloscolex opisthothecus, Kamchatka. 6928
Subsilicea fragilarioides gen. et sp.n. 5686
Suxenella crucigenaeformis gen. et sp.n. (Chlorophyceae), India. 7524
Symploca codiiformis, Tyrrhenean Sea. 5641
Sympodomma hatagumoana, Sagami Bay. 4089
Syndesmis echinorum, in echinoderm. 7116
Tarsonemoides limbatus, France. 4994
Terestricythere ivanovae gen. et sp.n. (Ostracoda), Kuril Islands. 7814
Testacea, Romania. 8726
Tetracotyle xenetodoni sp.n., from *Xenetodon cancella*. 8506
Thwaitia kotlani (Nematoda). 5936
Tilapia coffea, Liberia. 5418
Tisbe, Banyuls-sur-Mer. 7733
Tivela mulawana, South Arabia. 7059
Tokophrya wenzeli, on *Hydrachnellae*. 6837
Tomicodon bidens, Panama. 6387
Trematoda, Alabama. 8480
Trematoda, parasites of marine fishes. 5880
Trematops stonei, Permian, Ohio. 8000
Trichiuridae, India. 4435
Trichomycetae, France. 6814
Trimmia tevegae, New Britain. 3679
Tripterygion delaisi, Senegal. 8188
Trypanosoma lotae from *Lota lota* blood. 8457
Ulva arasaki, Japan. 6775
Undinella acuta. 4013
Urceolaria kozloffii, symbiont, Brachiopoda. 7651
Veneridae, Brazil. 7877
Xanthidae, West Pacific. 8562
Zelandobius illiesi. 4992
- ## New Zealand,
- Auckland Harbour, histology of *Solanderia*. 3334
 Canterbury, mountain lakes. 3099
Coeloplana willeyi. 1848
 continental shelf, benthos. 2397
 distribution of *Potamopyrgus antipodum*, effect of water temperature. 1997
Hemigrapsus edwardsi, rhythmic activity. 3397
 hot springs, algae and insects. 2386
 lakes, O₂. 3098
 new species of fossil algae. 3804
 parasitic *Anthosomidae*. 3364
Petalomera wilsoni larvae. 3373
Pseudoanemonia tentacula gen. et sp.n. (Cryptonemiales). 3280
Toheroa survey. 4137
 Wellington Harbour, seasonal changes in growth of erect stem of *Obelia geniculata*. 3333
- ## Newfoundland,
- distribution and characteristics of salmon. 387
 migrations of *Hippoglossoides platessoides* in St. Mary's Bay and on Grand Bank. 461
Molva dyptergia. 3018
 occurrences of *Myoxocephalus aeneus*. 436
 population studies on *Salmo salar*. 383
 West, cod fishery. 421
- Newt**, polarized movement, natural loops, lampbrush chromosomes. 5128
Nibea. 6489
Nickel. 7452
 effects on Tubificidae. 9076
Nineo, distribution. 3971
Nineo armoricana sp.n. 3971
Niphargus, Italy, subterranean. 4944
Niphargus virei, development of nervous system. 6976
Nippon spinosus, taxonomy. 438
Nistos, *Scyllarus tuberculatus* and *Scyllarus sordidus*. 4084
Nitella. 3816, 3818, 4571, 4675, 5813
 distribution of Cu in cells. 1053
 effect of colchicine on spermatogenesis. 8357
 electro-osmosis. 4645
 light effect on photosynthesis. 5723
 light-induced membrane potential changes. 5724
 photo-induced changes of resting potential, chloroplasts. 8359
 variations in chloride electrochemical potential. 5722
Nitella acuminata, Mexico and southwest USA. 4675
Nitella flexilis, membrane potential changes under

Nitella flexilis, contd.

magnetic field, 8358

Nitella translucens,

membrane electrical parameters, 45, 2524

sodium, potassium, dependence of membranes, 7522

voltage clamp method for measuring light induced potential changes, 8360

Nitellopsis, 3818**Nitellopsis obtusa**, 9059**Nitocra balnearia**, 3732**Nitophyllum nottii**, 6728**Nitrate**,

carboy microcosm, 3149

determination in seawater, 2459

Nitrate assimilation, as effected by light in *Chlorella* and *Ankistrodesmus*, 1046**Nitrate reductase**,*Ankistrodesmus*, 3225

marine phytoplankton, 1660

nitrate and ammonium nitrogen effect, *Chlorella*, 556**Nitrate reduction**, Peru coast, 1691**Nitrification**, by bacteria in low oxygen substrate and concentrations, 1810**Nitrile derivatives**, herbicides, 1744**Nitrite assimilation**, as effected by light in *Chlorella* and *Ankistrodesmus*, 1046**Nitrite reductase**, *Dunaliella tertiolecta*, 6766**Nitrogen**,

algal permeability, 3201

bioassay in algae and aquatic weeds, 1033

chlorosis in *Anacystis nidulans*, 1749

content determination, phytoplankton, 3711

effect on dehydrogenases, *Chlorella*, 4657

effect on heterocyst production in Cyanophyta, 1748

evaluation in pond fertilizers, 2293

excretion, effect of MS222, *Lepomis macrochirus*, 4413excretion, *Lepomis macrochirus*, effects of weight and temperature, 899excretion, *Neomysis rayii* and *Euphausia pacifica*, 1921

fixation, algae, 8296

fixation, *Anabaena cylindrica*, 8298fixation, *Azotobacter*, *Rhodospseudomonas* and *Cylindrospermum* in individual and mixed cultures, 592

fixation, Cyanophyceae, effects on crops, 3211

fixation, dystrophic lakes, 968

fixation, *Gunnera-Nostoc* symbiosis, 1756fixation, *Nostoc*, *Scytonema*, 3203hydroxylamine as source for *Candida* spp., 2558

losses from alkaline water impoundments, 2391

metabolism, *Ochromonas malhamensis*, 8319metabolism, *Prototheca*, 573metabolism, *Spirodela oligorrhiza*, 3311

preservation of packaged foodstuffs with nitrous oxide, 6347

regulation in sewage microbes, 988

relation between biomass and N₂ content of phytoplankton, 475

utilization of organic compound, taxonomy,

Chlorella, 3235

waste products and enzymes in Cirriformia, 652

Nitrogen-fixing algae, growth in fixed nitrogen, 2495**Nitrogen sources**,

anaerobic water treatment, 3154

effect on photosynthetic products in *Scenedesmus*, 1057**Nitrogenase**,activity, *Plectonema boryanum*, 8307

synthesis, algae, 8296

vegetative cells, *Anabaena cylindrica*, 3794**Nitrogenous constituents**, in blood and urine of *Carcinus*, 683**Nitrosocystis oceanus**, 5779**Nitrosogloea**, 5779**Nitrosoguanidine**,causing mutagenesis in *Anacystis*, 2490

Cyanophyta mutagenesis: repair, 2491

Nitrosomonas, 5779, 6618**Nitzschia**, 4486, 5645, 5674, 6742, 8229

Cayler Prairie, 5645

Nitzschia alba, leucoplasts, 8318**Nitzschia bathurstiana** sp.n., 5656**Nitzschia closterium**, excretion of carbohydrate, 3810**Nitzschia dissipata**, 3338**Nitzschia kowiensis** sp.n., 5656**Nitzschia obtusa**, 6742**Noctiluca**, swarming, Brittany coast, 7560**Noctiluca miliaris**,

electron microscope studies, 3851

role of nuclear ampullae and cytoplasmic constituents in mitosis, 8401

sexual reproduction, 8400

trichocysts and paracrystalline inclusions, 3853

Noctiluca scintillans, 5853**Noctilucidae**, study of the Leptodiscinae, 588**Nocturnal variations**, mobile fauna, Mediterranean, 4537**Nodosaria latejugata**, 8447**Nodosaria roemeri**, 3897**Noemacheilus** spp.n., W. Pakistan, 415**Nomenclature**, (see also **Taxonomy**)

Arcticidae versus Cyprinidae, 2788

Arthrosira neapolitana proposed to replace*Arthrosira brevis* (Kutzing) Prouet, 526

Bryozoa versus Ectoprocta, 280

comment on objection to proposed suppression of *Eliperurus spinicauda*, 353

common names of English and Japanese algae, 4

Crassostrea spp., India, 4144objection to suppression of *Buccinum pustulosum*, 229*Odinia*, 2038

of axolotl, 290

parasites, 3182

proposal to place *Pseudoscaphirhynchus* on Official List, 357

proposed suppression of 2 genera and 4 spp of amphipods, 194

Rapana venosa, 1999request for validation of *Murex lotorium*, L-1758, 726

Sparidae, 2287

Stammeridium nom.n., 5850**Noradrenalin**,

electrical response to, amphibian skin, 319

response of skin, Amphibia, 5136

North Africa, parasites and diseases of fish in warm-water ponds, 3572**North America**,first record of *Paradoxia multiseta*, 1780range extension of *Cyathura polita*, 1243**North Atlantic**, fungi, 1121**North Carolina**,

intertidal sandy-beach community, 494

Thalassia testudinata on deep sea floor, 83

North Sea,

- Cateria submersa sp.n. 1867
- dinoflagellates. 1080, 1081
- fungi. 1121
- parasites of fish. 3649

Norway,

- algae from Lyngør. 61
- coast, cell division of *Detonula confervacea*. 3217
- coast, fish larvae. 3014
- Corallina officinalis*. 581
- fish eggs and young, 1967. 2966
- Gammarus lacustris*. 2645
- Helicoprion*, Permian. 2944
- Hypsibius (Isohypsibius) stenostomus*, from Tromsø. 716
- Lake Vansjö, *Mysis relicta*. 1260
- new locality for *Codium fragile*. 39
- plankton. 2358
- records of freshwater Charaphyceae. 35
- Sør Trøndelag, Mollusca. 2738
- Spitsbergen, fauna. 2895, 2909
- Spitsbergen, *Littorina saxatilis* beneath ice. 2759
- Spitsbergen, *Odobenus rosmarus*. 2908
- Spitsbergen, *Pyrolofusus deformis*. 2772

Norwegian Sea,

- breeding of *Asterias rubens*. 2037
- Reinhardtius hippoglossoides*. 3045

Nostoc,

- properties of algal sheath. 5637
- symbiotic with *Gunnera*, nitrogen fixation. 1756

Nostoc commune, photomorphogenesis. 5636

Nostoc muscorum,

- biosynthesis of alkanes. 527
- cation requirements. 2509

Nostoc pruniforme, ecology. 4614

Nostoc punctiforme, Scytonema, fixation of elemental nitrogen. 3203

Nostoc sphaericum, respiratory sites. 3798

Notemigonus. 5182

Notemigonus crysoleucas. 7394

- karyology. 879

Notholca, Lake Baikal. 6919

Noto Peninsula, Vladivostok. 2486

Notochord, Amphioxus, sulphahydryl and disulphide group roles. 7940

Notocrangon antarcticus, ecology. 8587

Notodarus hawaiiensis. 7381

- eye lens nucleus proteins. 2027

Notomastus, role of proboscis. 5937

Notommata copeus. 7688

- ultrastructure secretory organs. 6918

Notonecta. 3425, 8607

- larvae, alarm ventilation. 3426

Notonecta glauca,

- microtubules. 4991
- ultrastructure of scent glands. 7012

Notonectidae, ecology, Caribbean. 7013

Notophryxus lateralis, ecology, California. 6033

Notophthalmus viridescens,

- effects of transplantation of pituitary. 8755
- migrations. 2856
- normal and ¹³¹I-treated thyroid gland. 766
- pituitary xenografts from *Ambystoma mexicanum*. 2049
- transplanted pars distalis. 6232
- ultrastructure autotransplanted pituitary. 6231

Notoscopeilus. 8039

Notostomus. 8560

Notothernia, southern Chile. 886

Notothernia gibberifrons. 8166

Notothernia neglecta. 8166, 8260

Notothernia syanobranchia, anatomy of Hypothalamus. 4419

Notropis ariommus, systematics and distribution. 880

Notropis atherinoides, ecology, Canada. 7338

Notropis edwarddraneyi. 6320

Notropis hudsonius, aggregating with Perca fluviatilis. 417

Notropis lutensis, karyology. 879

Notropis telescopus, systematics and distribution. 880

Notropis uranoscopus. 6320

Noturus flavus, distribution, Hudson Bay. 4378

Noturus munitus. 6320

Noumea norba. 8642

Noumeaella. 7843

Noumeaella africana sp.n., Tanzania. 7843

Nova Scotia,

- marine nematodes, Basin-Scots Bay area, Bay of Fundy. 130

- Sable Island, distribution of insular fishes. 457

Novumbra hubbsi. 5450

NTA, effect on estuarine phytoplankton. 9089

Nucella lapillus, see Thais lapillus.

Nuchal organ, ultrastructure, of Eurythoe complanata. 1193

Nucinella, anatomy, Carolina. 3471

Nuclear division,

- amitotic, Pithophora. 570
- Gyrodinium cohnii. 586
- Ulva pertusa. 1058

Nuclear volume/DNA ratio, in Aplysia. 718, 720

Nuclei,

- heterologous, induced character changes in Amoeba. 1153

- size differences in meristem, Elodea. 5812

Nucleic acids,

- acid-soluble nucleotides seasonal variation,

Oncorhynchus nerka. 6409

- analysis of RNA of *Euglena gracilis*. 3847

- brain cell content, *Octopus vulgaris*. 7101

- brain, *Oncorhynchus nerka*. 8920

- chromatographic analysis, *Xenopus laevis*. 6278

- DNA base composition. 3948

- DNA, chromosomal, *Rana pipiens* embryos. 6252

- DNA, *Paramecium aurelia*. 6858

- DNA, *Rana temporaria* embryos. 6251

- DNA synthesis in *Stylonychia notophora*. 3898

- DNA synthesis regulation, *Chlorella*. 7511

- DNA synthesis, X-irradiation effects, *Carassius auratus*. 6445

- effect of metabolites on flavour of fish. 6341

- effect on lithium and thiocyanate on synthesis,

Tetrahymena. 6861

- embryos, *Echinarachnius parma*. 8715

- endosymbiotic particles, *Paramecium aurelia*. 4817

- extraction, *Katsuwonus*, *Paralichthys*. 6574

- levels, *Cyprinus*. 8125

- metabolism, *Euplotes*. 6852

- nucleic DNA, *Artemia* biotypes. 663

- nucleic DNA, *Paramecium* spp. 3895

- organ specificity, brain, *Oncorhynchus nerka*. 8920

- patterns, *Minchinia nelsoni*. 3891

- precursors, *Marsilea drummondii*. 3313

- protein biosynthesis, *Salmo gairdneri*. 6428

- purification of DNA, *Anacystis nidulans*. 6738

- RNA, DNA, synthetic activity changes, *Oryzias latipes*. 7410

- RNA, embryogenesis, *Misgurnus fossilis*. 7336

Nucleic acids, contd.

- RNA, organ-specific, brain, *Oncorhynchus nerka*, 6410
 RNA populations, amphibian embryos, hybrids, 6289
 RNA, *Urechis caupo*, 7711
 mRNA in *Acetabularia*, 3819
 rRNA, *Gyrodinium cohnii*, 7556
 seasonal variations, *Oncorhynchus nerka*, 6408
 synthesis, sea urchin eggs, 4183
 synthesis during gastrulation, *Pleurodeles waltlii*, 8758

wild type and growth mutant of *Ulva mutabilis*, 1063

Nucleotide phosphodiesterase, brain, *Salmo*, 3618**Nucleotides**,

- acid-soluble, in adductor muscle of *Placopecten magellanicus*, 4160
 acid-soluble, of *Euchaeta japonica*, 2631
 degeneration, in frozen *Xiphias* muscle, 450
 fish tissues, 2917

Nucleus,

- Chlorophyceae, 7499
 division induction in *Scenedesmus quadricauda*, 3830
 envelope, ultrastructure and evolution, *Noctiluca miliaris*, 5767
 extrachromosomal nucleolar genes in amphibian oocytes, 289
 macronucleus, localization of [^3H]thymidine by radioautography, 5849
 maturation of, in spermiogenesis of *Hydra*, 639
 micronucleus, *Paramecium bursaria*, variability of DNA content, 5848
 polymorphism of micronuclei in *Paramecium*, 105
 role in division delay, killing and photoreactivation in *Amoeba*, 1152

Nucula, 5551**Nuculana**, 7874**Nudaciraxine gracilis**, 5881**Nudibranchs**, vacuum apparatus for the collection of, 506**Nuphar luteum**, chemical structure of nupharolidine, 6826**Nutrients**,

- algal, low flow transport, 3109
 Cananéia, 6646
 carbohydrates in bottom sediments, Kuril-Kamchatka Trench, 5555
 changes, during flooding of a salt marsh, 977
 Columbia River, 9060
 free and fixed amino acids, Black Sea, 5559
 inorganic nitrogen, Seas of Hiuchi and Bingo, 7443
Justicia americana and *Alternanthera philoxeroides*, 2361
 Lake Hayq, Ethiopia, 6620
 limiting growth of phytoplankton, 1653
 mesotrophic lake, 5775
 nitrates, effects on growth of *Pinctada*, 3473
 nutrient values of plants growing in salt marshes, 490
 organic, Kurile-Kamchatka shelf sediments, 5560
 organic substrates supporting growth of bacteria, 6807
 orthophosphate concentration by sediments, Lake Waco, 9063
 supersaturation of nitrogen, Columbia River, effects on *Oncorhynchus*, *Salmo*, 8919
 suspended, Baltic Sea, 5562
 temporary ponds, Louisiana, 9061
 variations, brackish water environment, 5535
 Voronezh River, 6619

Nutrition,

- Alestes baremoze*, 8127
 amino acids, *Anguilla japonica*, 5434
 amino acids, *Pleuronectes* and *Solea*, 3043
Aphanizomenon flos-aquae in culture, 4611
 classification by, limnic bacteria, 1813
Cosmarium turpinii, 1045
Dermocystidium sp., 602
 dietary proteins, *Cyprinus* larvae, 7323
 digestive enzymes, *Bufo regularis*, 7153
 digestive enzymes in *Arenicola marina*, 2603
Diplostauron elegans, 6765
 diurnal rhythm, *Leuciscus cephalus*, 8964
 effects of *Artemia* from different locations on larval development of crabs, 5945
 effects of starvation on nutrient stores, *Thais lamellosa*, 6126
 effects on fatty acid composition, *Orconectes limosus*, 4949
Esox, *Lucioperca*, *Micropterus*, *Perca*, 3608
 essential amino acids, *Ictalurus punctatus*, 7331
 free amino acids, *Cyprinus* larvae, 7324
 hypercalcaemia, *Anguilla anguilla*, 5435
 inorganic salt requirements, marine bacteria, 5776
 larvae, *Hippolyte inermis*, 4930
Lucioperca, 7364
Lucioperca, Lake Balaton, 7365
 mineral, *Chlorophyta*, 4688
 mineral effects on shoot production, *Typha latifolia*, 7608
 mineral, *Characeae*, 550
 mineral losses, *Typha latifolia*, 4795
Nannocalanus, *Eucalanus*, Guinea Bay, 8548
 nitrate assimilation in dark, *Lemna minor*, 8425
 nutritive value of algae, *Bivalvia*, 7987
Orconectes limosus, 7789
 phagocytosis and pinocytosis, *Spongillidae*, 4830
 phosphorus-limitation of growth, phytoplankton, 3709
 phytoplankton, 3719, 5503
 plankton, Columbia River estuary, 4483
Platydorina caudata, 4679
Pontonema vulgaris, 6914
 Protozoa, phagotrophic under axenic culture, 5845
 psychrophilic bacteria, 5778
 relationship of *Anemonia sulcata* and its dino-flagellate symbiont, 3915
 requirements of cultures of marine ciliates and heterotrophic flagellates, 5853
Rhodella maculata, 4724
Rhodophyta, culture, 4704
Rotifera, *Hiddensee*, 5930
Scenedesmus, 6772
Scenedesmus quadricauda, 6770, 6771, 7523
 sulphur, phosphorus, *Microcystis aeruginosa*, 5635
Syndesmis franciscana, 2592
Tilapia rendalli, 6528
Typha latifolia, *Scirpus americanus*, 7609
 vitamin, algae, Baltic Sea, 8277
 vitamin B, *Chaetoceros simplex*, 5666
 vitamin B, production by intestinal microorganisms, *Cyprinus carpio*, 8957
 vitamin B₁₂, transudation from bottom muds, Japan, 8404
 vitamin, fish, 8042
 vitamin requirements, *Chrysochromulina*, 4621
 vitamin requirements, *Seriola*, 3669
 zooplankton, 4492

Nutritive value,

algae, *Bivalvia*, 7987

Nutritive value, contd.

- aquatic flora, for Pisces. 7314
- Paralithoides camtschatica*. 698
- Nyctiphanes capensis*. 7747
- Nyctiphanes couchii*, North Sea. 6017
- Nyctotheroides*. 7623
- Nyctotherus*. 7623
- Nymphaceae*, leaf anatomy and alkaloid content. 4780
- Nymphalucina*. 7874
- Nymphoides indica*, variation, spectral qualities,
flowers. 4790
- Nymphon hirtipes*. 7837
- Nymphon macronyx*. 7837
- Nymphon strömi*. 7837
- Nyodocopina*, distribution, Peru-Chile Trench and
Antarctic Ocean. 4094
- Nystia*. 7019

O

- Obelia geniculata**, seasonal changes in growth, New Zealand, 3333
- Obelia loveni**, development of polyps, 635
- Occa verrucosa**, Canadian records, 464
- Oceanobdella biennii**, anatomy of larvae, 4877
- Oceanography**, (see also Chemical oceanography)
acoustically transparent hydrodynamic, 6711
apparatus for launching, towing and recovering buoy, 6351
Baltic Sea, 9072
chemical oceanography, Mediterranean, 3747
expedition, South Atlantic, 5552
fisheries hydrography, 2927
Gulf of California, 9075
Japan, 8048
ocean food of sockeye salmon, 6403
oxidation of organic matter, 1693
oxygen consumption of the seabed, 1692
Panama Bight, 5171
pearl culture ground, 3472
role of periphytic communities, 5561
Sargasso Sea, 3746
Suez Canal, Nile, Aswan Dam, 9137
thermal state of Gulf of Gascony, 823
- Ocenebra**, type-sp, 728
- Ochromonas**, 7488
osmoregulation with α -galactosyl glycerides, 1026
- Ochromonas danica**, disulphate of (+)-1,14-docosane-diol, 18
- Ochromonas malhamensis**, 3811
methionine biosyntheses, 20
morphogenesis of capsule, 19
urea formation and assimilation, 8319
- Ochromonas sociabilis**, 3811
- Octocanna haeckeli sp.n.**, from coastal waters off Santos, 3931
- Octocorallia**, Madagascar, 1849
- Octomeris**, 4900
- Octophialucium bigelowi**, 3931
- Octopus**, 3488
electron microscopy of neurons, 8691
feeding on gastropods, 2814
glucose and amino acid metabolism in brain, 7098
isolation of synaptic vesicles, 8693
learning behaviour, 8690
long and short term memories, 5039
muscle proteins, 3483
shape discrimination, 2031
synaprosomes, 4170
toxins, 2816
ultrastructure of gliovascular system, 270
vertical lobe, ultrastructure, 8692
- Octopus bimaculatus**, 6702
requirements, aquarium, 6702
- Octopus cyanea**,
behaviour, 8694
feeding, behaviour, 5036
- Octopus dofleini martini**,
anatomy, male reproductive system, North Pacific, 6158
spermatozoa anatomy, North Pacific, 6159
- Octopus maorum**, 5927
- Octopus vulgaris**,
brain growth, nucleic acid content, cell number, 7101
chromatic behaviour, 6160
feeding behaviour, 5038
gravity receptors, 7904
histo-enzymological investigations on muscle fibres, 272
hole-boring predation, 2813
lifespan, 7903
responses to automatic food dispenser, 271
retinal synaptic structure, 8695
- Ocypode**, 7690
- Ocypode cursor**, distribution, Aegean Sea, 7787
- Ocypode macrocera**, temperature effect on chromatophore, 4945
- Ocypode quadrata**, 8553
growth and sexual maturity, 1264
- Ocypode saratan**, systematics and biology, 4946
- Ocypodidae**, eyes, 6958
- Odagmia ornata**, accessory chromosomes, 7832
- Odinia**, nomenclature, 2038
- Odobenidae**, Miocene, 2906
- Odobenus rosmarus**, Svalbard, 2908
- Odonata**, 5529, 8618
British West Indies, 4105
ecology, 7826
ecology, Malaysia, 3429
growth rate, 7825
Lake Chad, 3427
larvae, 3946
Magdeburg, 7014
new to Romania, 711
specialized elements in optic system, 8618
taxonomy, larvae, 4988
Wadden Islands, 4978
- Odontaspis taurus**, variation in teeth, East China Sea, 8882
- Odonthalia**, 6728
- Odontoceram**, 3428
- Odontochile**, 7833
- Odontodactylus**, 4904
- Odontogadus**, strontium and calcium, Sea of Okhotsk, 4305
- Odontognathus spp.**, 8083
- Odontophrynus**, biometry and taxonomy, 5093
- Odontophrynus americanus**, genic action and polymorphism, 301
- Odontophrynus cultripes**, genic action and polymorphism, 301
- Odour pollution**, research, 3770
- Oecetis**, 4977
- Oediceros minor**, 6950
- Oedogoniaceae**,
new forms from Andhra Pradesh, India, 568
Tungar Hill, Maharashtra, India, 567
- Oedogonium**, 7501
cell division: mitosis, cytokinesis and cell elongation, 1054
Japan, 2525
new forms from Andhra Pradesh, India, 568
ultrastructure, 3829
- Oedogonium cardiacum**, 3829
Golgi body structure and wall formation, 4677
mitosis, wall formation, 4677
nuclear division, 4676
- Oepikina**, 7130
- Oestradiol 3-benzoate**, effect on Gadus plasma, 883

- Offshore, barrier island vegetation. 3866
- Ogmogaster grandis* sp.n., from Balaenoptera physalus, Antarctica. 6904
- Oikopleura*. 5062, 6201
- Oil,**
- animal, vegetable and marine, treatment. 5616
 - bacterial degradation. 6689
 - biochemical origin of hydrocarbons. 6601
 - crude oil, watersoluble compounds. 3779
 - dispersing products, toxicity. 3164
 - formation. 5611
 - Neomeris phocaenoides*, fatty acids. 2905
 - Peponocephala electra*, fatty acids. 2910
 - pollution. 6688, 8015
 - pollution, British Isles. 7459
 - pollution, British Isles, seabirds. 7461
 - pollution control, Santa Barbara. 7469
 - pollution, effect of burning oil. 7788
 - pollution, effect on zooplankton, Black Sea. 7473
 - pollution, Finland. 6687
 - pollution, Great Barrier Reef. 7465
 - pollution, New York conference. 6692
 - pollution, protection, fish farm netting, by air bubble barriers. 9097
 - pollution, Santa Barbara. 7460
 - pollution, water purification. 1719
 - recovery from marine organisms. 6722
 - retinal oil globule counts, *Pseudemys scripta*, *Chelonia mydas*. 8811
 - shark, fortification with oil. 2941
 - toxicity to aquatic plants. 7454
- Oithona*, key. 7724
- Oithona minuta*, Black Sea. 3989
- Oithona nana*. 7473
- ecology. 2357
- Oithona similis*, Black Sea. 3989
- Olfaction,**
- discrimination, of natural waters, by *Oncorhynchus nerka*. 840
 - olfactory organ, anatomy, *Euclichthys*. 7344
 - olfactory organ of *Anguilla*, *Abramis*, *Salmo* and *Esox*. 811
 - responses to waters in homing *Oncorhynchus*. 841
 - Taricha*. 2860
- Olindias**. 4833
- Oligochaeta**. 5529, 5546, 6929, 7438
- Africa. 4869
 - distribution in Lake Erie. 1203
 - distribution in Lake Vattern. 1194
 - Finland. 1871
 - flood zone of lake, Romania. 8524
 - regeneration rate. 3727
- Oligocladus**. 8388
- Oligocottus maculosus*, spermiogenesis, electron microcopy. 4420
- Oligomerisation**, Cladocera. 2626
- Oligoneuriopsis lawrencei*. 8608
- Oligotrichida*, morphology and systematics. 3889
- Oligotrophy**, effect of antimycin in oligotrophic lake. 5308
- Olisthodiscus*. 8284
- Olisthodiscus luteus*. 9088
- Olivancillaria urceus*, shell structure. 8662
- Olophorus*. 8560
- Olor buccinator*, ecology, conservation. 8021
- Olipidium*, Iceland. 1118
- Ommastrephes sloani pacificus*, acid soluble nucleotides, nucleosides and bases in liver. 7102
- Ommatocarcinus arenicola*, taxonomy. 8563
- Ommatocarcinus huttoni* comb.n. 8563
- Omobranchus punctatus*. 8163
- Ompok bimaculatus*, skull. 6474
- On-board ship gear,**
- pumping fish. 5194
 - ship trawl and rolling rig. 6059
- Oncaea neobscura* sp.n., Gulf of Lions. 4009
- Oncaea notopus*. 4009
- Onchidoris fusca*, spectral sensitivity and absolute threshold. 7049
- Oncholaimidae**, taxonomy. 7694
- Oncholaimium*. 7694
- Oncholaimus*. 7694
- Oncomelania*, culture, abnormalities on *Pachydrobia pellucida*. 4128
- Oncomelania minima*, anatomy. 1993
- Oncorhynchus**. 8038
- ascorbic acid requirements. 2976
 - bioassay, DDT. 8103
 - disease caused by *Aeromonas salmonicida*. 7279
 - disposal of sediments from Bellingham Harbour relates to fishery. 5279
 - diurnal rhythms. 2974
 - effect of disposal, of sediments, Bellingham Harbour. 7458
 - effect of supersaturation of nitrogen, Columbia River. 8919
 - growth, chemical composition. 8099
 - guiding by travelling screens, Washington. 8915
 - kidney disease, Michigan. 4327
 - larval differences between spp, Uchiura Bay. 8913
 - migration, North Pacific. 3611
 - migration, through pipes. 6422
 - ocean foods. 6403
 - predation by *Ptychocheilus oregonensis*, control. 8180
 - strontium and calcium, Sea of Okhotsk. 4305
- Oncorhynchus gorbuscha**. 8086
- colour in raw and cooked meat. 853
 - effects of delay of fertilization. 6421
 - intertidal and freshwater spawning grounds, Alaska. 8097
 - marking with fluorescent dyes. 6405
 - migration, survival aptitude, Alaska. 6404
 - serum lipids, gas of spawning fish. 3615
 - stomach contents. 842
 - Svalbard. 2973
- Oncorhynchus keta**,
- age determination. 373
 - colour in raw and cooked meat. 853
 - ecology. 8098
 - fry, relative growth. 2975
 - growth of juvenile under different feeding regimes. 377
 - nucleic acids. 816
 - origin, diagnosed by scales. 3612
 - phosvitin composition in roe. 5274
 - proteolytic enzymes, pyloric caeca. 8914
 - stomach contents. 842
 - timing of emergence, British Columbia. 4322
 - ultrastructure of adenohypophysis. 8911
 - use of defence reactions in fishing. 8912
 - variability and intraspecific differentiation. 4323
- Oncorhynchus kisutch**. 8870
- aflatoxicosis. 4328
 - ATPase activity in gills. 7276
 - bioassay, DDT. 8100

Oncorhynchus kisutch, contd.

- chlorinated hydrocarbons in young. 836
- colour in raw and cooked meat. 853
- effect of limited food supply on growth. 378
- experimental control of columnaris disease. 4326
- fluorescent pigment marking and finclipping. 376
- guiding, Oregon. 8870
- infectious pancreatic necrosis virus. 4325
- influence of temperature, X-irradiation, cell dynamics, intestinal epithelium. 6406
- neoplasms. 4329
- stomach contents. 842
- tagging. 4324
- UV-absorbing and UV-fluorescing substances. 372

Oncorhynchus masou,

- aging, Japan Sea. 7281
- distribution, Japan Sea. 7280
- ecology of juvenile. 2977
- larvae, Japan. 6407

Oncorhynchus nerka,

- absorption and retention of organic mercurials. 835
- aging. 373
- colour in raw and cooked meat. 853
- control of IHN. 8102
- cortisol dynamics in gonadectomized ♀♀. 838
- cytological changes in pituitary gland after gonadectomy. 371
- diel vertical movement. 8101
- ecology, Alaska. 6413
- effect of feeding before and after yolk absorption on growth. 844
- effect of finclipping on survival. 374
- effect of water quality and salinity on survival. 845
- feeding behaviour, Alaska. 6411
- feeding behaviour prior to migration. 8916
- gonadectomy, effects. 4330
- growth, Alaska. 2978
- interrenal tissue, hypertrophy. 4330
- larval development, Alaska. 6415
- larval ecology, Alaska. 6412
- larval migration, Lake Shikotsu. 7278
- localization of ACTH and prolactin in pituitary of migratory adults. 839
- nucleic acid. 816
- nucleic acid seasonal variations. 6408
- optimum escapements, river systems, southwest Alaska. 6419
- organ-specific RNA, brain. 6410
- organ specificity of nucleic acids, brain. 8920
- otoliths for aging. 6414
- quality of artificially and naturally produced fry. 843
- recruitment, Alaska. 6420
- relation between maturation and body size. 5275
- scales. 6417
- seasonal variation, acid-soluble nucleotides. 6409
- spawning populations, Alaska. 6416
- stomach contents. 842
- swimming thrust in relation to selectivity of gillnets. 375
- taxonomy, scales. 3613
- total stock, Kamchatka Basin. 8917
- ultrastructure of adenohypophysis. 5276

Oncorhynchus tshawytscha. 8885

- absorption and retention of organic mercurials. 835
- bioassay, eggs and fry, copper. 7453
- effect of flow on performance and behaviour, fishways. 6423
- effect of larvae and egg exposure to γ -irradiation. 8104

- egg-to-migrant survival, Washington. 6424
- exonuclease in testis. 5277
- fibroma, abdominal cavity. 3614
- hatcheries, Columbia River. 6425
- mortality due to *Piscicola salmositica*. 5281
- olfactory discrimination of natural waters. 840
- olfactory responses to waters during homing. 841

Ondatra zibethicus, sex ratio. 7221**Onigocia macrolepis**, hermaphrodites and sex reversal. 8178**Oniscidae**. 7741**Oniscoidea**,

- cave-dwelling, *Mexiconiscus laevis*. 7784
- Thau Basin. 7741

Oniscus asellus. 7744**Onithochiton**. 6162**Onithochiton hirasei**. 7105**Onithochiton neglectus**, ultrastructure, eyes. 3494**Onos**. 4304

- infection, *Lepeotheirus*, North Sea. 3649

Ontogeny, see **Development**, **Embryology**.**Onuphis**. 7440**Onychoteuthis banksii**. 7897**Onychoteuthis boreali japonica**, bioluminescence, Japan. 8696**Oocystaenium elegans**, life history, India. 8361**Oocystis**, mitosis. 6748**Oocytes**,

- amphibian, extrachromosomal nucleolar genes. 289
- cytochemistry, ultrastructure. 7945
- effect of gonad extract on maturation, *Asterias amurensis*. 6171
- gene amplification, *Ascapus truei*. 6208
- gene amplification, *Dytiscus*, *Colymbetes*. 6077
- maturation, *Pseudopleuronectes americanus*. 945
- phosphorylation, thymidine, *Xenopus laevis*. 5135
- Plecoglossus altivelis*. 5288
- Pseudorasbora pumila*. 5289
- ultrastructure of nuclear envelope, *Triturus alpestris*. 5125, 6275
- ultrastructure, *Teleostei*. 7347

Oogenesis,

- Arbacia punctulata*, nuclear activity. 2032
- Dinophilus gyrotilatus*. 2608
- diversity in RNA sequence, *Xenopus*. 3524
- Hyanassa obsoleta*. 2757
- phosphorylation of phosphoprotein, trout. 5311
- Planaria*, *Dendrocoelum*, *Polycelis*. 6906
- Triturus pyrrhogaster*. 5131
- ultrastructural study, *Brachydanio rerio*. 6443

Oomycetes, growth on amino acids. 8418**Oospores**, culture methods, *Aphanomyces euteiches*. 6817**Opalina**. 7623

- central fibril orientation of cilia and direction of beat. 7638
- Ohio. 7623

Opalina abtaigona. 3875**Opalina ranarum**, staining and fragmentation of pellicle. 5844**Operculum**, *Thais lapillus*, function. 4134**Opertochasma**. 7874**Ophiactis**. 5041**Ophiactis resiliens**. 7119**Ophiactis savignyi**, distribution, Banyuls-sur-Mer. 4184**Ophiocephalus**. 5457, 6376

- wound healing. 5457

Ophiocephalus gachus. 8861

- Ophiocephalus marulius*, morphology, histology, alimentary canals. 7408
parasitism by *Proalarioides tropidonotis*, India. 8510
- Ophiocephalus punctatus*, development of skull dermal bones. 7407
- Ophiocomina nigra*, neoplasms and related disorders. 4185
- Ophioglycera eximia*. 3967
- Ophiomyza brevissima*. 7119
- Ophionereis fasciata*. 7119
- Ophiopertis antipodum*. 7119
- Ophiotaenia*. 5908
- Ophiothrix*. 7113
- Ophiothrix fragilis*. 7917
aggregation. 2828
distribution, Devon. 7917
- Ophiura albida*. 5979
- Ophiura leptoctenia*. 7440
- Ophiura sarsi*. 7440
- Ophiuroidea*, Chile. 278
Washington State, southern BC, synopsis and key. 756
- Ophilitaspongia seriata*. 6868
- Ophryodendron hollandi* sp.n., France. 7639
- Ophryotrocha labronica*, pollution indicator. 6672
- Ophryoxus gracilis*, feeding mechanism. 3988
- Opisthoglyphe endoloba*, parasitic in *Rana*. 1177
- Opisthobranchia*, Curacao. 7841
ecology, southern tropical Pacific. 8642
new records, New South Wales. 6117
Queensland. 7024
Santa Barbara, California. 2767
southern tropical Pacific. 8642
structure of stomach. 7021
- Opisthonema oglinum*, fishing development, Florida. 5286
- Opisthopterus tardoore*, development. 4332
- Opisthorchis felinus*, metacercariae distribution, Caspian Sea. 8507
- Opisthotectis californiana*, Santa Barbara, California. 2767
- Oplichthys ogilbyi*, distribution, Australia. 8996
- Opmiotaenia filaroides*, from *Ambystoma maculatum* and *A. opacum*. 291
- Opsanus tau*, sodium exchange. 3705
- Opsarichthys microstis*, predator of *Plecoglossus altivelis*, Lake Biwa. 7340
- Optical density*, marine pseudomonad suspensions. 2551
- Oratosquilla mauritiana*. 7746
- Orchestia*. 7788
locomotory activity rhythms. 2658
- Orchestia gammarella*, cellulase activity. 6034
structure of gnathopods. 4061
- Orchispirium heterovitellatum* gen. et sp.n., (Trematoda) parasite, India. 5909
- Orcinus orca*. 7218
biology. 8847
respiratory function. 334
- Orconectes*, dichroism of photosensitive pigment in rhabdoms. 1266
- Orconectes immunis*, ecological isolation and competition with *O. virilis*. 7791
- Orconectes limosus*, carbohydrate spectrum of tissues. 207
composition and seasonal variations, lipids. 4948
diabetogenic eyestalk hormones. 2705
influence of eyestalk extract on haemolymph. 8588
metabolism. 7789
metabolism of ketone bodies. 4951
physiology, moulting hormones. 6977
- Orconectes nais*, chemical control. 4080
- Orconectes pellucidus*, annual reproduction rhythms. 4952
- Orconectes rusticus*, response of tissue to salinity stress. 8589
- Orconectes sanborni*, sclerotin in cuticle. 1922
- Orconectes umosus*, lactate dehydrogenase. 1265
- Orconectes virilis*. 6990
aggression. 1924
cholinergic inhibition of photoreceptors. 1923
ecological isolation and competition with *O. immunis*. 7791
effect of eyestalk. 7790
effect of hormones on Ca metabolism. 2657
influence of temperature and photoperiod on ovarian maturation and egg laying. 1267
ultrastructure, ganglionic roots, abdominal cord. 3407
- Oregon*, symbiosis between Pleistocene crabs and pelecypods. 201
- Oreoleuciscus*, taxonomy, USSR. 6475
- Organic acids**, accumulation, Chlorophyceae. 3250
effect on mitosis, *Triturus helveticus*. 5130
biosynthesis of hybrid proteins, algae. 4597
changes in culture, Chlorella. 4655
Chlorella, taxonomy. 3235
distribution, Black Sea. 5559
estimation in phytoplankton population. 5502
free amino acid pattern, *Metapenaeus dobsonii*. 8586
occurrence, *Grateloupia livida*. 5745
requirements, Rhodophyceae culture. 4704
ribosomes, dissociation. 4799
secretion, Gastropoda, Pacific. 3452
variation of quantity in plastids, Acetabularia. 5690
- Organic compounds**, 5-HT, effects on chromatophores, *Uca pugnator*, *Carcinus maenas*. 6053
- Organic material**, detritus, *Thalassia testudinum*. 5819
dissolved, marine environment. 3746
dissolved, periphytic communities, oceans. 5561
dissolved, seawater. 4504
estuarine environment. 5816
suspended, Arabian Sea. 5558
uptake by aquatic invertebrates. 654
- Orientation**, affected by severing, opercularis muscle, *Rana*. 768
fibrils of cilia, *Opalina*. 7638
mating call, female *Anura*. 2056
ocular counter-rotation, *Carassius*. 3631
phototactic, *Gyrodinium dorsum*. 5766
planktonic Crustacea. 3716, 3717
relation with diving reflexes, *Anas*. 4224
sun-compass, *Gambusia affinis*. 9032
sun-compass, temperature influence, *Talitridae*. 4947
underwater, man. 8268
vertical, *Trimma tevegae* sp.n. 3679
- Orientocreadium batrachoides*, from *Heteropneustes fossilis*. 134
- Orthetrum*. 7014
- Orthogalumna terebrantis*. 8233
- Orthopsyllus*, Norfolk. 3363
- Oryzias latipes*. 4744
androgenic and male-inducing effects of testosterone.

- Oryzias latipes*, contd.
6573
assay for hatching enzyme (chorionase) activity.
7409
effects of steroids on secondary sexual characters.
7411
genetics of body colour. 5458
hatching enzymes chromatography. 6571
inheritance of albinism. 3696
melanophore sensitivity. 6572
phosphomonoesterase levels, liver. 9039
photoperiodicity in xanthophores. 5459
protein synthesis activity changes. 7410
- Oscarella*. 6631
- Oscillatoria*. 4487, 6612, 6742
- Oscillatoria agardhii*,
gas vacuoles. 3204
photosynthesis. 1755
- Oscillatoria belmontica*, respiration. 12
- Oscillatoria borneti*. 8295
- Oscillatoria brevis*, respiration. 12
- Oscillatoria chalybea*. 6742
- Oscillatoria jasorvensis*. 3799
- Oscillatoria princeps*, gliding mobility. 3800
- Oscillatoria prolifica*. 8295
- Oscillatoria redekei*. 7425
taxonomy. 1028
- Oscillatoria rubescens*, ecology and physiology. 476
- Oscillatoria salina*. 3732
- Oscillatoriaceae*,
culture in synthetic medium. 3205
process for cultivation in synthetic medium. 530
revision of taxonomy. 1027
- Oscillaxanthin*, in sediment, Lake Washington. 1029
- Osmerus*. 4855
- Osmerus eperlanus*. 4418
larva. 819
- Osmoregulation**,
acetazolamide, bladder, *Pseudemys*. 5151
active sodium transport, aldosterone effect, frog.
7180
adaptation of *Branchinecta campestris* to saline
astatic waters. 1209
Amphibia. 8734
Amphistichus argenteus. 5388
Anguilla. 3685
Anguilla anguilla. 2339, 6545
Anguilla japonica. 3038
antennal gland, *Austropotamobius*. 6962
Aplysia californica. 8649
Asterias, *Gammarus*, *Gasterosteus*. 6169
asymmetry flow, intestine, frog. 7961
ATPase activity, *Oncorhynchus kisutch*. 7276
bladder, *Pseudemys scripta*. 7203
Buccinum undatum. 7851
chloride at low salinity, *Nereis diversicolor*. 7705
chloride regulation in *Lycastis indica*. 3960
Chrysophyceae, *Natal*. 3212
cloacal and salt-gland ion excretion, *Larus*
glaucescens. 3544
Corophium volutator. 8573
Crangon septemspinosa. 7759
Crocodylus, *America*. 3533
Crustacea. 7753
Cyclotella nana. 5671
Cyprinus. 8121
decapod larvae. 5999
effect of actinomycin D on ATPase activity, *Anguilla*
anguilla. 8196
effect of aldosterone on sodium transport and water
flux, ventral skin, *Rana temporaria*. 7994
effect of bladder catheterization, *Salmo gairdneri*.
7285
effect of propionate and other organic ions on sodium
transport across toad bladder. 5082
effect of salt depletion on hydromineral balance,
larvae, *Ambystoma gracile*. 5071, 5072
electro-osmosis, *Chara* and *Nitella*. 4645
endocrine control, *Corethra*. 4987
erythrocytes, *Galeichthys*, *Ictalurus*. 3643
fish eggs. 3556
freezing and thawing effect on properties of gills,
Artemia salina. 6936
Fundulus heteroclitus. 2318
Fundulus heteroclitus, supercooled. 5444
gills, *Salmo gairdneri*. 5298
Haloniscus searlei. 1912
induction of cellulase activity, *Achyla ambisexualis*.
6819
inland saline waters. 3121
ion exchange, *Scenedesmus*, *Chlorella*. 8367
Lampetra, *Petromyzon*. 8064
larvae, *Lampetra planeri*. 5197
Libinia emarginata. 8584
Ligia spp. 8585
Limnaea stagnalis. 7865
Malaclemys centrata. 7202
Melosira varians. 5678
Miamiensis avidus. 1835
mineral balance, *Anguilla anguilla*. 7387
Modiolus. 8675
monactin effect, *Loligo pealei*. 7901
muscle cell permeability, *Balanus nubilis*. 4902
Myxine glutinosa. 5200
Natrix cyclopion. 3541
Nereis diversicolor. 7706, 7707, 8534
nerves, *Eriocheir sinensis*. 3393
osmotic composition of ocular fluids, *Bufo marinus*.
8751
osmotic pressure of serum, yellow-tail. 8981
osmotic stress, *Eriocheir sinensis*. 8578
Pacifastacus leniusculus. 8590
Physalia physalis toxin effects on frog skin. 7675
Pisces. 5166
poikilosmosis, isosmosis. 5608
Polistotrema, *Leptocottus*. 8068
prolactin effect, *Gasterosteus aculeatus*. 3691
Pseudemys scripta. 3537
pseudomonad, potassium-dependent deplasmolysis.
6810
role of edge damage in sodium permeability, *Bufo*
marinus. 7954
role of preoptic-neurohypophysis, *Bufo bufo*. 6214
role of urinary bladder, *Ambystoma mexicanum*.
5074
Salvelinus fontinalis. 6436
Scutus breviculus. 8667
seawater teleosts. 2326
smolt, *Salmo salar*. 7288
sodium active transport, skin, frog. 7187
sodium and chloride transport, *Rana catesbeiana*
tadpoles. 5099
sodium, chloride and water balance, *Aphanius*
dispar. 5436
sodium efflux, sartorius muscle, *Rana pipiens*.
7179
sodium exchange, *Opsanus tau*. 3705
sodium transport, gastric mucosa, hypoxia, *Rana*

Osmoregulation, contd.

- temporaria, 7993
- sodium transport, retina, frog, 7194
- sodium transport, toad bladder, 7953
- Sudanomantes africanus africanus, 1938
- Taeniomembras microstomus, Australian salt lakes, 4478
- Teleostei, 8888
- Teleostei, Baltic Sea, 5404
- tolerance limits, Bufo marinus, South Florida, 5081
- transport and retention of potassium, pseudomonad, 6809
- transport characteristics of Bufo marinus skin, 5084
- transport of urate and PAH, water snakes, 8010
- Trionyx spinifer, 3537
- turtle, 5148
- Valonia ventricosa, 4698
- volume changes, internodal cells, Characeae, 6751
- volume control of Callinectes muscles, 1902
- water electrolyte regulation, thermally acclimated carp, Cyprinus carpio, 8959
- water movement through bladder, toad, 6210
- with α -galactosyl glycerides in Ochromonas and Rhodophyceae, 1026
- Osteology, see Skeleton.**
- Ostracion lentiginosus**, 8856
 - secretion of Puhutoxin, 8211
- Ostracion meleagris**, 4524
- Ostracoda**, 5547, 8240, 9052
 - aggregation, Cypridopsis, Cyprinotus, 6061
 - distribution, Texas bays and lagoons, 6060
 - fossils, South Africa, 6065
 - Isles of Scilly, 7812
 - neogenous, Puerto Rico, 4976
 - spermohistogenesis in vas deferens, 7813
 - stereoscan, freeze drying, 6064
 - Terestricythere ivanovae gen. et sp.n., Kuril Islands, 7814
- Ostrea**, 7087
- Ostrea edulis**,
 - aquaculture, Spain, 6149
 - catch, peak tension and ATPase activity in glycerinated adductor, 744
 - influence of light on fixation, 745
 - Lim Channel, Adriatic, 4157
 - problems of larval culture, 6150
 - seasonal variations, meat and glycogen, 5028
- Ostrea lutaria**,
 - frozen storage life, 2800
 - pH and quality, 2801
- Ostrea madrasensis**, fallout radioactivity in, 261
- Ostroumova inkermanica**, distribution, South Africa, 7672
- Otoliths**,
 - Clupea harengus, Gulf of St. Lawrence, 825
 - Gadus, chemical composition, 3015
 - use in aging Pollachius virens, 5381
- Otolithoides brunneus**, biology, India, 4421
- Otolithus microdon** gen.n., 429
- Ototyphlonemertes antipai** sp.n., Black Sea, 1868
- Ova, see Eggs.**
- Ovalipes**, morphology of stridulatory structure, 4062
- Ovalipes ocellatus**, 8553
- Ovary**,
 - abnormalities, Gerres oyena, Pulicat Lake, 4408
 - Amphibia, follicular atresia, 2070
 - corpora lutea, maintenance gestation, Nectophrynoides occidentalis, Africa, 5091
 - culture, Thalamita crenata, 7809

Dinophilus gyrotilatus, 2608

- effect of eyestalk removal on growth, Scylla serrata, 209
- effect of hypophysectomy, methallibure and thiourea, Poecilia reticulata, 5468
- effect of increase in photoperiod, Heteropneustes fossilis, 8141
- effect of methyl testosterone, Poecilia reticulata, 5467
- effect of varying photoperiod, Heteropneustes fossilis, 8142
- Poecilia, effect of salmon gonadotrophin on, 467
- preparation of chromosomes, Fundulus, 5447
- responses to photoperiod, Heteropneustes fossilis, 8143
- Spisula sachalinensis, 7896
- Overwintering**, 4798
 - Salvelinus fontinalis, Wis., USA, 382
- Ovular atresia**, Amphipnous suchia, 1639
- Ovulidae**, eastern Pacific spp revised, 224
- Owenia fusiformis**, reproduction, 3347
- Oxidation**, organic matter, seawater, 1693
- Oxycephalus**, 5222
- Oxygaster bacaila**, parasites, 3335
- Oxygen**,
 - adaptation to low levels, Alma emini, 7702
 - algal permeability, 3201
 - anatomical adaptations to deficiencies, Pisces, 7394
 - balance in micro stabilization pond, 984
 - blood, Pisces, 8890
 - Chlorella pyrenoidosa, 4661
 - concentrations, relation to mortality of Ephemerella rotunda, 1698
 - consumption and chloride uptake in Paratelfhusa hydrodomous, 2702
 - consumption by eggs, Labeo rohita, 6472
 - consumption by larvae of Ichthyomyzon hubbsi, 8062
 - consumption, fossils, 7480
 - consumption, haemoglobin-free Chaenocephalus aceratus, 7352
 - consumption, Echiurus echiurus, 2610
 - consumption, Littorina, Mytilus, 7867
 - consumption, Liza macrolepis, 3693
 - consumption, Marisa cornuarietis, in relation to body weight and temperature, 1990
 - consumption, Panulirus japonicus, 1931
 - consumption, Penaeus indicus and P. semisulcatus, 2684
 - consumption, Priapulus caudatus, 2617
 - consumption, relation with thyroid activity in Cichlidae, 885
 - consumption, Scylla serrata, effected by eyestalk removal, 1935
 - consumption, seabed, 1692
 - consumption, seasonal changes, Cirripedia, 1892
 - consumption, Unio pictorum, 8685
 - deficiency, fauna on New Jersey wrecks, 5399
 - deficiency in fish ponds, 2488
 - dissociation curves, Scylliorhinus canicula, 359
 - dissolved oxygen, estimation, 3762
 - effect of acid on evolution, Scenedesmus, 5727
 - effect of eyestalk removal on consumption, Caridina rajadhari, 8572
 - effect of increased tension on bioelectric properties from a nerve, 6245
 - effect of temperature on consumption, Crepidula fornicata, 6108
 - effect on carbon dioxide fixation, Chlorella, 4658
 - effect on end-products of glycolysis in Rangia

Oxygen, contd.

- cuneata, 2017
- effect on growth and food conversion, *Esox lucius*, 6397
- electrochemical measurement of O₂ in water and sewage, 508
- equipment for maintaining dissolved oxygen level, 4564
- light-dependent system, *Anabaena variabilis*, 4606
- light effect on consumption, *Eunicella stricata*, 7668
- measurement of primary production, 8225
- New Zealand lakes, 3098
- nocturnal variations, Mediterranean, 4539
- recording, 5598
- resources, 6640
- Rio Negro, Amazonia, Brazil, 2950
- seasonal variation in consumption, *Carassius auratus*, 8949
- supersaturation in coastal waters, Maine, 498
- thermal reaction, *Chlorella pyrenoidosa*, 4660
- Tubularia*, 7678
- uptake by benthic communities, 2388
- uptake, effect of environmental factors, 2413
- U-tube water oxygenation, 3171
- Oxynoche panamensis***, 8663
- Oxyrrhis marina***, nutritional requirements under axenic culture, 5845
- Oxytoxum ligusticum***, 7426
- Oxytonum margalefi* sp.n.**, 5489
- Oxytoxum obesum***, 7426
- Oxytonum tonollii* sp.n.**, 5489
- Oxytrema proxima***, relationship with environment size and population parameters, 6123
- Oxyurella***, 6937
- Oysters**,
 - aquaculture, Ostend, 7089
 - chromatography of sphinga-4, 8-dienine in glyco-lipid, 8671
 - off-bottom culture, North America, 2789
- Ozobranchidae**, redefinition, 3972
- Ozobranchus branchiatus***, 3972
- Ozobranchus margo***, 3972
- Ozone, preserving effect, fish, 2302
- Ozophora norrisii***, 6728

P

- Pachycheles*. 6978
- Pachydictyon coriaceum*, tetraspores. 2545
- Pachydrobia pellucida*, abnormal tentacles and eyes. 4128
- Pachygrapsus marmoratus*. 7472
- Pachysoeca obliqua*. 6597
- Pachysphaera* spp. 5490
- Pacifastacus leniusculus*,
assimilation efficiency. 2659
resistance, *Aphanomyces astaci*. 4031
salinity tolerance. 8590
ultrastructure of arthrobranch. 6036
- Pacifastacus trowbridgii*, egg-laying. 7792
- Pacific Ocean**,
Anchoa walkeri sp. n. 3604
Balaena gracilis. 2898
Bismarck Archipelago, Spongillidae. 3907
Calanus tenuicornis. 3356
chlorophyll maximum. 2352
distribution of *Tochuina tetraquerta*. 2777
east, cowries from. 225
east, diagnosis of new septibranch. 731
east, Mitridae. 237
east, muscle protein polymorphism in *Anoplopoma fimbria*. 3654
east, revision of *Ovulidae*. 224
east tropical, *Atraiophos eastropas* sp. n. 821
east tropical, micronekton, and relations to tuna. 452
equatorial, phytoplankton. 1654
fisheries of *Sardinops caerulea* and *Brevoortia tyrannus*. 2987
Fissurisepta pacifica from Triangle Island, BC. 231
gastropod acid secretion. 3452
north, origin of *Oncorhynchus keta*. 3612
north, paleontology. 3784
northeast, first records of *Parabassogigas grandis*. 439
northeast, fishery exploration. 793
plankton. 3056
salmon movement. 3611
South China Sea, *Calonoides philippinensis* sp. n. 3991
water-extractable carbohydrates. 3713
zooplankton. 3719
- Packaging**,
apparatus. 6349
canning, tuna. 7379
identification of canned salmon by scale characteristics. 6402
preservation of foodstuffs with nitrous oxide. 6347
preservation of shellfish, shrimps. 4025
shrimps. 6997
- Padina**. 8278
- Padina arborescens*, photosynthesis and respiratory activity during spore formation. 3262
- Padina testastromatica*. 8278
- Paenodes*, New Zealand. 5976
- Pagellus centrodontus*, growth. 901
- Pagophilus groenlandicus*,
blood protein polymorphism. 335
lipid composition of blood. 7219
physical blood properties. 336
retinal structure. 6309
strontium and caesium levels in tissues. 6302
- Paguridea**, distribution, Pembrokeshire. 4034
- Pagurus**, 4911, 7749
tactile stimuli in social behaviour. 3370
- Pagurus bernhardus*. 5984
- Pagurus cuanensis*. 5984
- Pagurus pollicarus*,
morphology of superficial muscles and nerves of abdomen. 1927
movements and calculations of forces exerted by muscles. 1929
reflex control of ventral superficial muscles of abdomen. 1928
- Pagurus prideauxii*. 5984
- Pagurus pubescens*. 5984
- Paints**,
antifouling. 9133, 9140
apparatus for application. 9122
chemical control of fouling organisms. 5824
protection application systems. 5603
underwater application. 6709
- Paivella naporai*. 8544
- Pakistan**,
Karachi, occurrence of *Arenicola brasiliensis*. 1191
Kirchnerielloosaccus lunatus gen. et sp. n. (Chlorococcales). 3238, 7519
Korang stream, bottom fauna. 1681
West, *Noemacheilus* spp. n. 415
West, prawns. 2672
- Paladilhia**. 7023
- Palaemon adspersus*, deformities of chelae. 3416
- Palaemon elegans*, ultrastructure of spermatozoa. 1930
- Palaemon serratus*,
culture. 2691
culture of larvae. 6979
fluorescent substances in eyes. 183
- Palaemonetes kadiakensis*, primary mycosis in larvae. 195
- Palaemonetes varians*, effect of $HgNO_3$. 2644
- Palaemonetes vulgaris*, pigment dispersal and concentration. 8591
- Palaemonidae**, New Caledonia. 7750
- Palaeoecology**,
Foraminifera as evidence of modern warming in North Atlantic Ocean. 3880
Pleistocene and foraminiferal biostratigraphy. 3879
- Palaeoecology**, 7612
benthos, North Carolina. 7612
Foraminifera. 3884
Miocene diatomites, Oregon. 16
number of invertebrate fossils. 7613
Porifera. 7654
- Palaehydrology**, use of chemical composition of freshwater clamshells as indicators. 4135
- Palaemagnetism**. 3808
- Palaentology**,
Bivalvia, Cretaceous, South Dakota. 7874
Brachiopoda, Guatemala. 6192
Brachiopoda, Nevada. 6191
Bryozoa, Tennessee. 6190
Calcarea. 7655
Carolina. 8267
Ceratites, Triassic, Germany. 7093
Chitinozoa of Cedar City Formation, Devonian, Missouri. 5828
Constantina pulchra, Devonian, Pennsylvania. 7133

Palaeontology, contd.,

- Devonian Foraminifera, North Dakota. 5839
 Diatomaceae, Minnesota. 5647
 Diatomaceae, Norway. 5650
 distribution of algae in Pennsylvanian, USA. 5629
 ecology, Cladocera, Denmark. 5949
Enchodus lewesiensis, Texas. 9028, 9029
 extinction, Ammonoidea. 7094
 Foraminifera, Tertiary, Puerto Rico. 7624
 fossil echinoids, Spain. 7107
 Fusulinacea, Arizona. 5829
 history of Carboniferous amphidisc and hemidisc sponges, Uruguay. 5855
 Monoplacophora and Pogonophora, Cambrian Seas. 4172
 Paleosiren beinerti, Permian, Czechoslovakia. 6233
 Pelobatidae, North America. 7159
 phosphatic fossils detection. 6164
 Porifera. 7657
 Reptilia. 8006
 Stepanoviella, distribution. 6193
 Tentaculitidae, Devonian, Alaska. 6163
 Trilobita, Massif Arize. 7833
 ultrastructure of Precambrian microorganisms. 5638
 Upper Devonian sponges from Alberta. 5856
 Upper Tithonian, Bavaria. 5613

Palaeoprotistology, typification. 619

Palamis platurus, oral sensory papillae. 783

Palatability,

- effects of fish feeds on chickens. 8095
 factors affecting fish taste. 3585
 fish flavours. 6341
 gonads, Echinoidea. 8722
 treating of *Trachurus trachurus* with surfactants. 9007

Paleofavosites. 7665

Paleosiren beinerti, distribution, Permian, Czechoslovakia. 6233

Palinarus laevicauda, fishery, Rio Grande do Norte, Brazil. 692

Palinurellus, phyllosoma larvae. 7793

Palinuridae, fertilization mechanism. 6981

Palinurus. 4915

Palinurus argus, fishery, Rio Grande do Norte, Brazil. 692

Palinurus elephas, fishing industry, Ireland. 8592

Palinurus gilchristi. 7751

Palmitic acid metabolism, *Cyprinus carpio*. 7316

Palombiella stephensoni, ultrastructure. 3945

Paludella. 4777

Palythoa. 8856

Palythoa tuberculosa, Aluterin, *Alutera scripta*. 3684

Panagrellus, growth inhibitors. 4863

Panagrellus redivivus. 3948

Panagrellus silusiae. 3948

Panama,

Gobiesocidae. 3687

Gobiosoma (Austrogobius) polyporosum from Pacific coast. 892

Panama Canal, algae. 41

Pancreas, *Salmo*, containing IPN virus. 855

Pancreatic enzymes, *Protopterus aethiopicus*. 7415

Pancreatic proteases, purification, Balaenoptera. 4257

Pandalopsis. 5188

Pandalus. 5188

Pandalus borealis,

Bering Sea, Gulf of Alaska. 2675

conversion. 7794

effect of heat treatment on colour and machine

peelability. 3371

fishery and biology, Greenland. 2681

fishery biology in Ishikari Bay, Hokkaido. 1268

photoreception, nauplius eye. 4953

protandric haemaphroditism. 2693

Pandalus hipsinotus, 7753

fishery biology, in Ishikari Bay, Hokkaido. 1268

Pandalus jordani,

microbiological evaluation of processing. 197

relative abundance and predator food habits. 2667

Pandalus montagui, ecology, Quebec. 4954, 4955

Pandalus platyceros, development of androgenic gland. 6035

Panicum maximum. 7314

Pannax gen. n. for *Otolithus microdon*. 429

Pantodon buchholzi,

air breathing. 5287

cranial osteology. 7282

Panuliridae, larvae, Eastern Indian Ocean. 4064

Panulirus, phyllosoma larvae. 4956

Panulirus argus,

population estimates, Brazil. 6037

queuing behaviour. 196

Panulirus cygnus, larval ecology, Western Australia. 4064

Panulirus gilchristi. 6981

Panulirus homarus, 6981, 7751

mating behaviour, oviposition, fertilization. 3417

Panulirus interruptus, induced bactericidal response. 1269

Panulirus japonicus, O₂ uptake. 1931

Panulirus ornatus. 7751

Panulirus polyphagus, distribution, Cochín. 4063

Papiella otophthalma comb. n. 8494

Papillae, of *Triturus cristatus*. 772

Parabassogigas grandis, from northeastern Pacific. 439

Parabathynella. 8552

Paracalanus parvus, 7473

Black Sea. 3989

Paracanthochus ophellae sp. n. 5921

Paracanthopterygii, evolution. 5205

Paracaudina aspiculata sp. n., Manila Bay. 4176

Paracentrotus, development. 2830

Paracentrotus lividus, 7120

chromatography, aminoacyl tRNA synthetase. 7121

effect of treatment with actinomycin D, embryos. 7919

removal of actinomycin D. 7920

synthesis of rRNA. 5048

Parachaenichthys charcoti. 8166

Paraconger guianensis. 9014

Paracryptogonimus catalae. 5880

Paracryptogonimus longitestis. 5880

Paracryptogonimus provitellosus. 5880

Paracryptogonimus saccatus. 5880

Paracryptogonimus testitactus. 5880

Paracycloctyla cherbonnieri gen. et sp. n.

(Monogenea), British Isles coast. 7683

Paracypris polita. 7812

Paradelocrinus decoratus sp. n. 8702

Paradiscogaster eniwetokensis sp. n., parasite in *Chaetodon strigangulus*. 8508

Paradoxia multisetata, North America, first record. 1780

Paradoxostoma ensiforme. 7812

Paradoxostoma normani. 7812

Paradoxostoma variabile. 7812

Paraenvironment, South Orkneys. 8260

Paragonimus westermani, parasite. 6046

Paragorhynchus chariensis sp. n. 7692

- Parahaustorius longimerus*, ecology and life-cycle. 187
- Paralabrax nebulifer*, deformities. 902
- Paralcyonium elegans*. 3913
- Paralichthys*. 5188, 7270
- Paralichthys californicus*, extensions of known northern range limits. 431
- Paralichthys dentatus*. 4387
- Paralichthys lethostigma*, 7269
ultrastructure, pseudobranch. 3706
- Paralichthys olivaceus*, extraction of nucleic acids. 6574
- Paralinhomoeus uniovarium* sp. n. 5921
- Paralithodes*, benthos, Sea of Okhotsk. 4958
- Paralithodes camtschatica*, 7753
chemical composition, nutritive values. 698
degradation of adenine nucleotides in muscle during storage and cooking. 680
effects of delayed mating on reproduction. 2660
electrical and mechanical properties, closter muscle. 4065
starch gel electrophoresis of haemocyanin. 1244
- Paramacrurus australis*. 8051
- Paramecium*, 3875
autonomy of pellicular DNA. 4813
behaviour in gravity fields. 104
conjugation and differentiation of rudiments of macronucleus. 3894
cytophotometric studies on nuclear DNA. 3895
DNA. 3895
genetics, NADP isocitrate dehydrogenase. 3320
ionic mechanisms controlling behaviour. 101
locomotion in static electric and magnetic fields. 5846
passive electrical properties, ciliary coordination. 5847
soluble surface proteins. 1836
- Paramecium aurelia*,
antigen synthesis, immobilization antigen. 8450
competition. 623
cortical structure. 1156
cytoplasmic inheritance of erythromycin-resistant mutations. 7641
DNA properties. 4814
effect of UV on origin of trichocysts. 622
electron transport system of kappa particles. 8451
endosymbiont. 3893
interacting genetic systems. 6858
localization of [³H]thymidine by autoradiography, macronucleus. 5849
monomeric globular proteins. 4816
mutagen effects. 4812
neoplasms and related disorders. 3896
nucleic acid and protein content, endosymbiote particles. 4817
populations adapted to CaCl₂. 621
serotype transformation. 1155
structural protein from trichocyst. 1154
trichocyst development. 4811
ultrastructure. 4810
variations in enzymes between syngens. 7640
- Paramecium bursaria*,
competition. 623
heterocaryon. 4815
variability of DNA content of micronuclei. 5848
- Paramecium caudatum*,
amount of DNA in micronucleus. 3894
cilia orientation. 1840
competition. 623
effect of β and α 2-guttiferins. 107
ex-autogamont stages of nuclear reorganization. 103
polymorphism of micronuclei. 105
responses to external stimuli. 7642
ultrastructure and glycogen metabolism. 6859
- Paramecium multimicronucleatum*, nephridial apparatus. 1160
- Paramecium putrinum*. 6831
- Paramecium trichium*, morphogenesis. 102
- Paramegalodus*, taxonomy. 6151
- Paramesacanthion* spp. n., Northumberland. 5932
- Paramesacanthion hirsutus* sp. n. 5932
- Paramesacanthion marei* sp. n. 5932
- Paramoeba eilhardi*, ultrastructure. 6860
- Paramoeba pernicioso* sp. n., parasitic in Callinectes sapidus. 1143
- Paramuricea clavata*, influence of light on O₂ consumption. 7668
- Paramurrayona corticata*. 6870
- Paramurrayonidae*. 6870
- Parapandalus*. 8560
- Parapenaeopsis*. 6039, 6983
- Parapenaeopsis tenella*, India. 7795
- Parapenaeus*, 5172
composition of flesh. 4066
- Paraphysomonas vestita*. 6597
- Parapilumnus* spp. n., West Pacific. 8562
- Parapilumnus coralliophilus*. 8562
- Parapilumnus incertus*. 8562
- Parapilumnus mondai*. 8562
- Parapsectra nana* sp. n., Europe. 1959
- Parapsectra uliginosa* sp. n., Europe. 1959
- Parapseudocyclopoides*. 4007
- Parasilurus asotus*, ultrastructure, receptors, small pit organ. 4379
- Parasites, (see also Diseases)**
5912, 5927, 5928, 5931, 5970, 6115
Acanthobothrium quadripartitum in Raja radiata. 8487
Acanthobothrium, taxonomy, biology. 2586
Acanthocephala, Chad. 7692
Acrocheatium spp. 3263
adaptation of Aphanomyces astaci. 1125
Aedes polynesiensis by Coelomomyces macleayae. 5802
Aggregata eberthi. 4803
amino acids in Littorina and its parasite Microphallus. 1987
Amoebophilidium spp. n., ectoparasite from prototocous algae. 93
Amphocleithrum paraguayensis gen. et sp. n. 4853
Anafilaroides in Biomphalaria glabrata. 5002
Anafilaroides rostratus in Biomphalaria glabrata. 7695
Anaporrhutum stunkardi sp. n., in Scoliodon dumerilli. 1856
Ancistrumina nucellae in Nucella lapillus. 4805
Ancyrocephalus, taxonomy. 8490
Anisakis nematodes in Sebastodes diploproa. 4430
Aphanomyces astaci, host relationship. 4031
Aphanomyces euteiches in water snails. 6817
Aphelidium chlorococcarum. 5831
Argasilus auritus in Gasterosteus aculeatus, Newfoundland. 4897
Argulus foliaceus on Cyprinus carpio. 6942
Argulus on Lepisosteus platyrhincus, Everglades. 4461
Ascocotyle sexidigita sp. n. in Fundulus. 8491
Aspidogaster conchicola in molluscs. 2808
Astasia fennica in Copepoda, France. 6838

Parasites, contd.,

- Atractolytocestus huronensis* from *Cyprinus carpio*, North America. 5885
 attractant secreted by *Bulinus* for *Schistosoma haematobium*. 5917
Balanus, New York. 4901
 barnacles, *Eschrichtius robustus*, California. 8845
Bdellovibrio bacteriovorus. 3296
 blood, Amphibia and turtles. 2893
Brachycoelium salamandrae. 3939
Branchiophryxus, *Stylocheiron*, India. 4925
Briarosaccus (Rhizocephala). 6956
Bucephalopsis spp. n., India. 3335
Bucephalus sp. in *Crassostrea virginica*. 7882
Bucephalus varicus in *Pinctada fucata*. 3476
Caligus hobsoni sp. n., California. 5965
Caligus mortis sp. n., Africa. 3357
Callotetrarhynchus sp. parasitic on cultured yellowtails. 1170, 1171
Cancerilla, Africa. 3358
Capillaria salvelini, in *Salvelinus fontinalis*. 1185
 carp, fish farms, USSR. 4370
 cause of gill disease, *Thanatostrea polymorpha*. 7088
Cephalogonimus americanus, *Rana clamitans*. 5102
Cephaloidophora warekara sp. n. parasitic in *Caprella*. 1172
Cercaria chackai sp. n. in *Melania* spp, India. 5886
 cercariae from freshwater molluscs of India. 1173
 cercariae from *Limnaea*, India. 6898
 cestodes, Bermuda. 8484
Chondracanthidae. 5966, 5967
Choricotyle oregonensis sp. n., parasite of *Antimora rostrata*. 5888
Chytridiaceae, parasitic on *Phanerogams*. 3305
Chytridiomycetes, algae. 5800
 ciliates from fish, Lake Seliger. 106
Clinostomum giganticum. 8495
Clinostomum in fishing-eating birds, Colombia. 6300
Clinostomum marginatum, renders *Pimephales promelas* susceptible to predation by *Micropterus salmoides*. 7339
Cloacitrema philippinum sp. n., from *Cerithium ornata*, Philippine Islands. 5890
Coelomomyces macleayae on *Aedes polynesiensis*, Fiji. 6069
Coelomomyces punctatus on *Anopheles quadrimaculatus*, Carolina. 6073
 competitive exclusion in *Gasterosteus aculeatus*. 5913
 Copepoda, Australia. 4890
 Copepoda, New Zealand. 3364
 Copepoda parasitism by *Flagellata*. 6849
 Copepods in diet, *Echeneidae*. 7418
Coregonus clupeaformis parasitism by *Trienophorus crassus*. 7687
Corynosoma hamanni. 3949
Cotylurus, Berlin. 4855
Crepidostomum, fish, Mississippi. 5891
Crepidostum and *Derogenes* from *Gasterosteus*. 1183
 Crustacea from fish, Volta Basin and South Ghana. 1887
Cryptocotyle causing lowered heat tolerance in *Littorina*. 724
Culex pipiens larvae by nematodes. 7008
Cyclocoelum spp. 5892
Cyclocotylodes pinguis in *Chalinura* and *Hemimacrus*, Oregon. 5888
Cyclopoida in *Holothuria*. 5966
Cymothoidae. 4060
Cymothoidae from fish, Gulf of Marseilles. 181
Cypriniformes, Iraq. 8117
Dactylogyrus, *Gyrodactylus*, Sweden. 8496
Dactylogryidae spp. n. from fishes of Illinois. 5879
Dasyatis americana, parasitism by *Acanthobothrium*. 5883
Dasymetra conferta, intramolluscan stages. 5894
Dermocystidium granulosum sp. n., on *Tetraodon palembangensis*. 6812
 desmid parasitism by fungi, Windermere. 8327
 development of *Trypanosoma canadensis* in *Placobdella*. 1151
Digenea, Bermuda. 8488
Dinema spp. n., Lithuania. 6841, 6846
Dinema harpacticolens sp. n., Poland. 6842
Dinema mazuriense sp. n., Poland. 7547
Dinema metabolicum sp. n., Lithuania. 6843
Dinema ocelli parasitic on Copepoda. 159
Dinema semiparasiticum sp. n., Lithuania. 6844
Dinema symmetricum sp. n., Poland. 6845
Dinemina ocelli gen. et sp. n., Lithuania. 6847
Diocotaenia cancellata gen. et sp. n., in *Rhinoptera bonasus*, Chesapeake Bay. 5895
Diogenella, parasite of *Holothuria*, West Indies. 7728
Diphyllobothrium plerocercoids parasitic in *Gasterosteus aculeatus*. 2588
Diplectanidae, from teleosts, Gulf of Lion. 7680
Diplodiscus lali sp. n. in *Rana tigrina*. 1865
 Diplozoon paradoxum in *Rutilus* and *Abramis*. 2589
Discogasteroides australiensis sp. n., from *Sphaeroides armilla*. 5897
Dissonus nudiventris. 4001
 distribution of *Dolichodorus heterocephalis* in Lake Champlain. 1186
Dracunculus medinensis. 7726
Dugesia, Brazil. 6901
Echeneibothrium, California. 3336
Echeneidocoelium indicum, in *Echeneis naucrates*, Bay of Bengal. 5900
Echinorhynchus salmonis. 5929
Edlintonia pychocheila gen. et sp. n. (Cestoidea), North America. 8500
 effect of *Plagioporus virens*, digestive gland of host *Flumenicola virens*. 8666
Eimeria, Lake Seliger. 6836
Eirgos, Florida. 3361
Embiotocidae by Copepoda. 5968
Entobdella soleae, spermatophore. 8502
Entoconchidae, unisexuality. 2750
 epidermis ultrastructure, *Entobdella soleae*, *Acanthocotyle elegans*. 8501
Ergasilus confusus in *Perca fluviatilis*, Lake Ontario. 7730
Ergasilus cyprinaceus sp. n. 5970
Eubothrium crassum, *Salmo gairdneri*, vermifuge. 4335
Eudactylinidae, New Zealand. 5975
Euglenoidina. 6850, 6851
Euproctus montanus host to *Acanthocephalus* and *Brachycoelium*. 764
Eylais. 7834
Eylais spp., on Hemiptera. 2716
Fasciola gigantica, Rhodesia. 8504
Foleyella confusa sp. n., from *Rana limnocharis*, Manila. 8517
 fungal, effect on cultures of *Scenedesmus*. 1783
Gemmosaccus sulcatus, effects on host. 5984
Gigantione moebi. 4090
 gymnophallid, effects on behaviour, *Macoma*

Parasites, contd.,

- balthica. 6140
- Gyrodactylus aurorae sp. n., from Rana aurora, California. 5903
- Gyrodactylus cameroni sp. n., Newfoundland. 6549
- Gyrodactylus luciopercae from fish in the Danube Basin. 1861
- Gyrodactylus unicopula from Pleuronectes platessa. 1860
- Haplochinae, Siluroidea, India. 6903
- Haplostomella australiensis on Styela etheridgii. 4006
- Hartmannella tahitiensis sp. n., in Crassostrea commercialis. 7078
- helminthofauna of sturgeons, Russia. 5428
- helminths from freshwater fish, Sudan. 124
- helminths of Apeltes quadracus, Newfoundland. 6549
- helminths of Catostomus spp. 2995
- Hirudinea, population control. 4871
- host-attachment system of Loxomespilum. 651
- host location, Schistosoma mansoni. 5918
- host-parasite relations of Clypeoniscus. 687
- host specificity and rejection, Schistocephalus solidus. 8513
- host specificity, Caryophyllaeidae. 5882
- host specificity, Dactylogyrus lamellatus, from Hypophthalmichthys molitrix. 5893
- Hymneolepis microstoma in Tribolium confusum. 8503
- hyperparasitism in Rana pipiens. 5908
- Ichthyophthirius in carp. 3645
- Icosiella hoogstraali from Rana macrodon, Manila. 8517
- Ictalurus spp. parasitized by Glaridacris confusus and Nematobothrium texomensis. 2591
- influence of light and depth on location of host, Schistosoma haematobium. 5916
- inhabiting interstitial system of crab gills, Caribbean. 7690
- intestinal, of Pollachius spp. Isle of Man. 5382
- isopod in Chanos chanos. 3626
- Joyeuxiella guilhonii sp. n., from Zibethailurus serval, Tchad. 7682
- Labryrinthula on Thraustochytrium, Baltic Sea. 8420
- Lacistorhynchus tenuis, hatching in vitro, oncospheres. 5904
- Lampsilis radiata infesting Perca flavescens. 254
- Lagenisma coscinodisci, Coscinodiscus. 7587
- larvae, Terranova decipiens, Nova Scotia. 4866
- latin nomenclature. 3182
- Lepeotheirus, Onos spp., North Sea. 3649
- Lepidodidymocystis. 4859
- Lepidodidymocystis irwini gen. et sp. n., Menticirrhus nasus, Mexico. 4859
- Lernaea cyprinacea, control. 3362
- Lernaea cyprinacea, in Rana catesbeiana. 5098
- Leucochloridium papillocirratum sp. n., parasite of Rallus aquaticus. 5905
- life cycle of Carneophallus spp. n. 642
- life cycle of Trypanosoma chrysemidis. 1150
- littoral pollution. 6681
- Luculinidae, life history. 8442
- Lymnaea, Ottawa. 8657
- Lyrodiscus minimus sp. n., Ambloplites rupestris, Illinois. 5879
- maintenance of Ligula intestinalis in the laboratory. 645
- marine Trematoda, Massachusetts. 8482
- Megalodiscus microphagus in Amphibia. 2590
- Merlangius merlangus. 3017
- metazoan, of Ambystoma opacum and A. maculatum larvae. 291
- Microcotyle salpae. 4416
- microsporidiosis in paenaeid shrimps. 2695
- Minchinia nelsoni on Crassostrea virginica. 7882
- Mollusca, Amudar'ya Delta. 8643
- monogenean, Pisces, Africa. 6900
- Mononema perpendiculare sp. n., Lithuania. 6853
- Mytilicola, Mytilus edulis. 5974
- Mytilicola intestinalis, seasonal variations in biochemical composition. 8547
- Mytilicola orientalis, fecundity. 670
- Myxobolus argenteus sp. n. on golden shiner. 2572
- Myxosoma intestinalis sp. n., Mugil waigensis, India. 5843
- Myxosporidea, freshwater fish, Brazil. 5842
- Nanophyetus salmincola, ultrastructure of cell wall. 8505
- Nasitrema. 5906
- Nauplicicola spp. n., Lithuania. 6857
- Nectonema munidae on Munida tenuimana. 696
- Nematoda. 3950
- Nematoda from gill chambers of Monohystrium inquilinus sp. n. 1190
- Nematoda spp. n. 3340
- Nematoda, Chad. 7693
- Notophryxus lateralis, California. 6033
- occurrence of spirochete-like organism in tissues of Artemia salina. 5947
- of corals. 3325
- of Crassostrea virginica, Gulf of Mexico. 4148
- of Ergasilus cerastes sp. n. 5971
- of fish, Asia and Far East. 3573
- of fish, Colombia. 6300
- of fish, Europe. 3570
- of fish, Near East and Africa. 3571
- of fish, North Africa. 3572
- of fish, West Pakistan. 134
- of Nucella lapillus. 6122
- of Parona signata, Argentina. 8179
- of Sebastes mentella, North Atlantic. 9002
- of Triaenophorus crassus in Lampetra japonica. 647
- Ogmogaster grandis sp. n. from Balaenoptera physalus, Antarctic. 6904
- Onuxodon parvibrachium in Pycnodonta hyotis, Indo-Pacific. 6508
- Onuxodon parvibrachium in Pycnodonta hyotis, Seychelles. 6508
- Ophiodon elongatus by Chondracanthus narium sp. n. 3996
- Opisthioglyphe endoloba in Rana. 1177
- Paenodes, New Zealand. 5976
- Paradiscogaster eniwetokensis, sp. n. from Chaetodon strigangulus. 8508
- Paradiscogaster manteri sp. n. from intestine of Anoplocapros lenticularis. 5897
- Paramoeba pernicioso sp. n. in Callinectes sapidus. 1143, 6964
- parasitic mites used for aging dragonflies. 2729
- parasitism of demids by funi, Windermere. 8327
- Peltogaster paguri, effects on host. 5984
- penetration of plerocercoids, Proteocephalus ambloplitis. 5912
- Phlyctidium scenedesmi. 4690
- Physoderma on Asclepias incarnata. 2554
- Pinnotheres pisum in Mytilus edulis. 202

Parasites, contd.,

- Piscicola salmostitica* in *Oncorhynchus tshawytscha*. 5281
- Plicobothrium globicephalae* gen. et sp. n. from *Globicephala melaena*. 1180
- Podochytrium cornutum*, *Stephanodiscus rotula*, British Isles. 4771
- Portunio conformis*, USA. 4077
- Posthodiplostomum minimum*, *Lepomis macrochirus*. 3662
- Potamiscus cognatus* on *Paragonimus westermani*. 6046
- Proalarioides tropidonotis*, larvae in *Ophiocephalus marulinus*, India. 8510
- Prohopyrus* sp. in *Hippolysmata wurdemanni*. 4047, 6025
- Protococcus*, Ramalina. 5726
- Prototransversotrema steri* gen. et sp. n. (Digenea) from *Aldrichetta forsteri*, Australia. 8511
- Protozoa from fish. 1144
- Protozoa spp. n. Lake Seliger. 6836
- Pseudomurraytrema*, Alabama. 5914
- Ptychobothrium*, Iran. 7684
- Pythium marinum*, *Porphyra*. 5749
- resistance, *Gasterosteus*. 6562
- resistance, *Lymnaea catascopium pallida*. 8657
- Rhizoccephala*, Bering Sea. 6956
- Ribeiroia marina*, West Indies. 5915
- Rimacephalus arecepta* sp. n., Baikal. 6907
- Roccus americanus*. 6518
- role of Hirudinea in life cycle of fish blood parasites. 5944
- Sacculina*, effects on haemolymph proteins, *Carinus*. 3388
- Salmincola* on *Salmonidae*. 4010
- Sarracenia purpurea*, Quebec. 3310
- Scambicornus brachysetosus* sp. n. 4011
- Schistosoma*. 7685
- Schistosoma*, effect on digestive gland of *Biomphalaria glabrata*. 6105
- Schistosoma mansoni*, cercarial transmission, Nile Delta. 7686
- Schistosoma mansoni*, control of *Biomphalaria pfeifferi*, chemicals, Tanzania. 7849
- Schistosoma mansoni* in *Biomphalaria alexandrina*. 7847
- Schistosoma mansoni* in *Biomphalaria sudanica*. 7031
- Schistosoma mansoni*, predation, *Utricularia*. 7685
- Scolex pleuronectis*, in *Fasciolaria tulipa*, Florida. 6902
- seasonal distribution, *Pinctada fucata*. 3477
- Simulium neavei*, larvae, Tanzania. 8631, 8632
- Skrjabinozoum exocoetidi*, from *Exocoetidae*, Red Sea. 6909
- Sphaeronellopsis dikrothrix* sp. n. from *Metavargula ampla*. 1275
- Sphyrion lumpi* on cod and Greenland halibut. 1220
- Spinitectus beaveri*. 5935
- Spirorchis scripta* suppresses egg-laying in *Meneus dilatatus*. 6115
- Spiruridae*, Pisces, Nantes. 8515
- sporulation in *Minchinia costalis*. 5840
- Stellantchasmus falcatus* in *Mugil cephalus*. 6910
- survey, vertebrates, Malaysia. 8034
- survey, vertebrates, Philippines. 8035
- Swingleus polyclithroides* gen. et sp. n., *Fundulus grandis*. 4860
- Taeniacanthus canthigasteri* on *Canthigaster rivulata*. 165
- Tanypleuridae* fam. n. on fish, Canadian Atlantic. 166
- taxonomy, Copepoda, Japan. 3353
- Thersitina gasterostei* on *Gasterosteus wheatlandi*. 167
- Thespesiopsyllus paradoxus*, Norway. 5979
- Thwaitia kotlani*. 5936
- tissue response in fish infected with *Ligula intestinalis*. 1863
- Tracheliastes chondrostomi* on *Chondrostoma nasus*. 168
- Trematoda, Alabama. 8480
- Trematoda, Biscayne Bay. 4851
- Trematoda in Embiotocidae. 5389
- Trematoda of Amphibia, Ivory Coast. 3944
- trematode larvae in *Littorina*. 725
- trematodes from fish in Central Africa. 1857
- trematodes from gills of marine fish, India. 125
- Trienophorus nodulosus* in *Roccus americanus*, Lake Ontario. 6533
- Trienophorus* spp. in Lake Mälaren fishes. 1179
- Trichodina, Physa. 4823
- Trichodinidae, freshwater fishes. 8440
- Trichomycetae, France. 6814
- Trypanosoma*, blood of *Lota lota*. 8457
- Trypanosoma rotatorium*, *Rana clamitans*, Louisiana. 5101
- Tulasnella zooecia*, *Amoeba terricola*. 4772
- Urceolariidae, southwest Atlantic. 6866
- Vermetus triqueter*, avian parasites, Marseille. 6912
- whole mounts, Mollusca. 4998
- Xenocoeloma alleni*. 5981
- Xenopacarus africanus* gen. et sp. n. (Ereynetidae) on *Xenopus*. 2736
- Parasoxostoma*. 7812
- Parastaciidae*, Australia. 3391
- Parastenocarididae*, distribution and dispersal in Northern Europe. 1219
- Parastenocaris*. 3997
- Parastenocaris gertrudae* sp. n. 3997
- Parastrombidium*. 3889
- Parategastes caprinus*. 7724
- Paratelfusa hydrodromous*, behaviour of black chromatophores. 4068
- fate of conjugated proteins during vitellogenesis. 199
- O₂ consumption and chloride uptake. 2702
- protein metabolism and reproduction and moulting. 4067
- RNA activity in protein-yolk biosynthesis. 4959
- Paratelfusa masoniana*, effect of antibiotics on heart. 198
- Parathemisto gaudichaudii*, food of *Balaenoptera borealis*. 8593
- Parathemisto pacifica*, parasitism by *Thalassomyces marsupii*. 5768
- Parathunnus mebachii*, muscular carnosine. 788
- Paraturbanella malayica*. 3953
- Paraturbanella mesoptera* sp. n. 3953
- Paraturbanella microptera*. 3953
- Paraturbanella roscovita*. 3953
- Paraturbanella teissieri*. 3953
- Paratyposyllis peresi* sp. n., Mediterranean. 4868
- Paraxanthias parvus*, southern Japan. 8594
- Parazoa. 7656
- Parclasmopus albidus*, Gulf of Mannar and Palk Bay. 4028
- Parenophrys bubalis*, feeding. 3027

- Pareques viola*. 8041
Parerythropodium coralloides. 3913
Pareuglypha indica sp. n., India. 6833
Pariambus typicus var *inermis*, distribution on *Asterias rubens*, British Isles. 7796
Paromalostomum, systematics and ecology. 128
Parona signata, parasites, Argentina. 8179
Paronychocamptus nanus, new to Belgium. 671
Parophrys vetulus,
 age and growth, California. 6578
 age growth and productivity, Puget Sound. 6577
 dispersal, Washington coast. 6576
 microsporidial infection. 939
 papillomas, epizootiology. 4466
 parasitism by *Philometra americana*. 3341
 Puget Sound. 5464
 tagging, California. 5463
 tagging experiments, British Columbian waters. 6575
 ultrastructure of kidney tubules. 5462
Parorchis acanthus. 6122
Parthenospore induction, in *Volvox aureus*. 1059
Parundinella emarginata. 6940
Pasiphaea ecarina sp. n., West Africa. 2661
Pasiphaea multidentata, breeding and fecundity. 699
Patagonia, biocenotic environment description. 4244
Patella, body temperature. 2811
Patella coerulea,
 green pigment of ova. 1994
 temperature dependence of metabolic rate. 681
Patella safiana, population fluctuations, Spain. 1995
Patella vulgata,
 blood group A reactive substance. 8664
 histology, tentacles. 7050
 hydrostatic pressure in heart. 7868
 locomotion. 3447
 purification and properties of mannosidase. 6124
 seasonal variations, biochemical composition. 3446
 temperature dependence of metabolic rate. 681
Patents,
 antifouling liquid. 4562
 dessert gel, carrageenan from algae. 3196
Pathobiology, *Probopyrus* sp. 4047
Pathology. 5970
Cynolebias bellottii. 456
 cystic fibrosis. 6138
 diseases, *Salmo gairdneri*. 4333
 poisoning by medusa *Gonionemus vertens*, Sea of Japan. 5869
 poisonous shellfish, infected with *Gonyaulax catenella*. 3131
Probopyrus in *Hippolysmata wurdemanni*. 6025
 scales, *Cyprinus carpio*. 6460
 toxins from *Tetraodontidae*. 9016
Patina pellucida, behaviour on *Laminaria hyperborea*. 727
Patinopecten yessoensis. 7618
Patiriella, distribution, Tasmania. 4187
Patiriella regularis, recorded in Tasmania. 279
Patiriella vivipara sp. n., Tasmania. 4186
Pavona frondifera. 5549
PCP,
 herbicide, metabolism by *Tapes philippinarum*. 5591
 pollution. 5590
Pearl formation,
 abnormal, in *Pteria (Pinctada) martensii*. 747
Biomphalaria glabrata. 6104
Peat-hags, use as fish ponds. 3568
Pecten gibbus, Cape Kennedy, Fla. 262
Pecten irradians, enzymatic properties of axonemes. 7890
Pecten maximus, optimum concentration of gametes. 6148
Pectinaria. 7117
 isolated mitotic apparatus from eggs. 1197
Pectinaria gouldii, birefringent layer of eggs. 4878
Pectinaria koreini, paleae. 8536
Pectinatella magnifica. 8622
 substrate discrimination. 7134
Pectinura maculata. 7119
Pectispongilla. 4826
Pediastrum. 4508
Pediastrum boryanum, developing cell walls. 1781
Pedinomonas minor. 6597
Pedocotyle minima. 5881
Pelagohydra mirabilis, ultrastructure. 8473
Pelagothurioidea. 7115
Pelamis platurus, salt-gland secretion. 328
Pelecypoda. 5609
 accumulation and elimination of poliovirus. 260
 bacteria in shellfish, Mexico City. 242
 in fauna, Chile Bay. 4528
Pellicle, *Paramecium aurelia*. 1156
Pellona spp. 8083
Pellucidhaptor angularis sp. n., parasite of *Carpodotes cyprinus*, Illinois. 5879
Pellucidhaptor eremitus, parasite of *Carpodotes cyprinus*, Illinois. 5879
Pelmatochromis ansorgii, behaviour. 7368
Pelocoris convexus sp. n. 7003
Pelomyxa palustris. 7626
Pelopia. 3422
Peloscolex sp. n., Atlantic. 3349
Peloscolex benedeni. 7701
Peloscolex inflatus, reproduction, Lake Baikal. 6931
Peloscolex multisetosus, feeding in polluted harbour. 2620
Peltaster. 6177
Peltodoris atromaculata, anatomy, histology and histochemistry, alimentary canal. 4129
Peltogaster aelanticus sp. n. 4022
Peltogaster paguri, effects on host. 5984
Pelvetia. 6781
Penaeidae,
 amino acid composition. 6983
 catch and heat summation. 2665
 chromatographic analysis, muscle myogens. 6039
 culture of larvae. 2663
 ecology. 8555
 effects of salinity and temperature on postlarvae. 2688
 fishery, mariculture, Gulf and Caribbean Sea. 6040
 Gabon and Angola. 2662
 increasing production, Mexico coast. 2696
 larval culture. 2669
 life histories. 7798
 marking. 2697
Penaeus, 6039, 6044, 6983
 culture, Louisiana. 4961
 diagnostic characters of juveniles, North America. 6043
 distribution, Jamaica. 4907
 prejuvenile, Glaveston estuary and Gulf of Mexico. 2692
 relation between tail length and total length. 200
 Western Atlantic. 6044
Penaeus aztecus, 7798, 8553
 albinism. 8596

- Penaeus aztecus**, *contd.*,
 predicting abundance, Gulf of Mexico. 2674
 relation of freshwater drainage to production. 2680
 variation in length after preservation. 4069
- Penaeus duorarum**, 4907, 7797, 7798
 aquaculture, Florida. 4960
 ecology, Dahomey. 3372
 factors controlling time emergence. 2685
 larval history, South Florida. 2678
 life cycle. 2668
 migrations, Florida. 6042
 observation in darkness. 6041
 tide-associated movements. 2679
- Penaeus fluviatilis**, relation of freshwater drainage to production. 2680
- Penaeus granulosus**, type specimens. 7799
- Penaeus indicus**, O₂ consumption. 2684
- Penaeus japonicus**,
 behaviour in relation to moving net. 8595
 culture in Japan. 2676
 fluorescent substances in eyes. 183
- Penaeus kerathurus**, allometric growth. 6984
- Penaeus orientalis**, population estimates, Korea. 6982
- Penaeus schmitti**, 4907
 fishery biology. 2654
 general biology, Unare lagoon. 4071
 metabolic indices and survival. 2664
- Penaeus semisulcatus**,
 diurnal rhythm. 7800
 O₂ consumption. 2684
- Penaeus setiferus**, 3565, 7798
 amino acid composition of collagen. 8597
 emigration. 2687
 trypsin. 1932
- Penetrantia operculata** sp. n., distribution, Hawaii. 4195
- Penetrantia parva**, distribution, Hawaiian Islands. 4195
- Penguins**, with Chlamydia antibodies. 786
- Penillia avirostris**, 7473
 ecology. 2357
 ecology, Mediterranean. 5537
- Penitella conradi**, boring Haliotis. 2802
- Pennaria**, paths and rates of food distribution. 7674
- Pennaria tiarella**,
 ontogeny of interstitial cells. 1168
 sperm ultrastructure. 7673
- Pennatula borealis**, porphyrins. 5876
- Pennisetum purpureum**. 7314
- Pentamera lissoplica**. 7440
- Pephredo potamogeti**, proposed suppression of potamogeti. 194
- Peponocephala electra**, oil, fatty acids. 2910
- Peprilus**. 7270
- Pepsinogens**, A, C and D from Mustelis. 808
- Peptones**, microbiological, from fish meat. 802
- Peracarida**, vertical distribution, Gulf of Marseilles. 4072
- Perca**, temperature adaptation at protein level. 4309
- Perca flavescens**,
 epidermal lesions. 4432
 spawning behaviour, aquaria. 3667
 swimming ability of larvae. 449
- Perca fluviatilis**, 3608, 5929, 6518, 6650, 8997
 aggregating with Notropis fluviatilis. 417
 changes in biochemistry during infection by Microcystis. 4422
 fecundity in the Klicava water reservoir, Czechoslovakia. 440
 feeding behaviour, Windermere. 4423
 formation of multivesicular bodies from nuclear envelope of gas glands. 6509
 influence of temperature on embryology. 5405
 morphology of head. 2283
 nutrition and growth in 1st year. 441
 parasitism by Ergasilus confusus, Lake Ontario. 7730
 reproduction, Baykalian lakes. 8997
- Percichthys melanops**, taxonomy. 438
- Perciformes**, osmoregulation, yellow-tail. 8981
- Percina aurolineata**. 6320
- Percina lenticula**, size record. 6510
- Percis japonicus**, morphology. 8855
- Percopsis omiscomaycus**, purines responsible for silvering. 813
- Periclimenaeus** spp. n. 1934
- Periclimenes setoensis** sp. n., Japan. 4052
- Peridiniopsis borgei**, taxonomy. 1798
- Peridinium**, 5488, 6796, 8390
 effects of toxin on other algae. 4744
- Peridinium cinctum**, life histories, Lake Kinnereth. 3289
- Peridinium gatunense**. 6796
- Perinereis**. 3969
- Perinereis cultrifera**,
 anatomy of musculature. 4879
 musculature of pharyngeal bulb. 4880
- Perinereis kuwaitensis** sp. n. 8535
- Periodicity**,
 algal, River Moosi, India. 3113
 colour sensitivity, Lebistes reticulatus. 3048
 synchronization of locomotor tidal rhythm of Carcinus. 1237
- Periophthalmidae**, territorial behaviour. 4424
- Periophthalmus**, eye musculature. 6512
- Periophthalmus schlosseri**, Vellar Estuary, India. 6511
- Peripherea**, biometry. 6868
- Periphyton**,
 association. 4583
 communities, role in energy flow, oceans. 5561
 primary production. 8226
 quantitative method for study. 1019
- Peritricha**, parasites from fish, Lake Seliger. 106
- Perla marginata**, antennae and cerci anatomy. 7015
- Permeability**,
 in frog's skin, induced by staphylococcal α -toxin. 771
 of muscle cells of Balanus to non-electrolytes. 169
- Perna canaliculus**, fouling organism in Kouma harbour. 4158
- Perna perna**. 6145
- Peronodoris rehderi**. 8642
- Perotrochus beyrichii**, geographical distribution. 1996
- Persian Gulf**, Foraminifera. 3884
- Peroxidase**,
 activity of asporulate. 3857
 algae. 4590
- Peroxisomes**,
 larvae, Phallusia, Ascidia. 7141
 liver and kidney, Amphibia. 7175
- Peru**,
 nitrate reduction in seawater. 1691
 Phrynos wermuthi sp. n. 784
- Pervicacia tristis**, anatomy. 233
- Pest control**, cycloalkyl carbonic acid esters. 2468
- Pesticides**, 5781, 7483, 8274, 9138
 antibacterial agents. 9130
 antifouling agents. 4576
 antifouling compounds. 6712

Pesticides, contd.,

- antimicrobial agent. 6720
- antimicrobial agent, 2,4-diazido-6-phenylpyrimidines. 9129
- antimicrobial complex organo-tin compounds. 7057
- bactericides, fungicides, herbicides. 9132
- chemical composition. 8272, 8273
- chemical control. 7482, 7483
- chlorinated hydrocarbons in young Lake Michigan *Oncorhynchus*. 836
- concentration by algae. 3130
- control of microorganisms using tandem polyhalide resin. 9131
- N-cyanoformyl-N-arylamines for combating molluscs and microorganisms. 241
- cyclic sulphates, for control of bacteria, fungi and algae. 8409
- Daphnia*. 7718
- DDT, accumulation, *Platichthys flesus*. 8212
- DDT, accumulation, *Solea solea*. 8216
- DDT, bioassays. 7450
- DDT, endrin, *Pimephales promelas*. 7448
- degradation. 3764
- detection, use of bacteria. 3162
- determination in water. 8249
- dichlorophene. 6664
- dieldrin trapping, chlorophyte culture. 5708
- dihalo-sulphones. 4763
- dinitrostyrenes, molluscicides. 6103
- distribution in surface waters. 3131
- Dursban, persistence in freshwater ponds. 6654
- effect of agricultural chemicals on spawning, *Carassius carassius*. 8132
- effect of 2,4-D, *Lepomis macrochirus*. 7447
- effect on embryology, *Mercenaria*, *Crassostrea*. 6141
- effect on estuarine organisms. 9067
- extraction, lake water. 6657
- Fintrol-5 for *Cyprinodon* control. 6552
- floating larvicides. 7481
- fouling organisms. 7736
- fungicides. 9127
- Hirudinea. 4871
- Ichthyomyzon fossor*, Lake Superior. 7251
- metabolism in marine organisms. 1202
- molluscicides. 8644
- molluscicides, *Phytolacca dodecandra*. 7839
- molluscicides, spraying to control *Fasciola gigantica*, Rhodesia. 8504
- monitoring of organochlorine residues, British Isles. 7462
- organo-tin compounds. 4764
- Pinctada fucata*. 3477
- pollution control, Canada. 9096
- pollution monitoring, estuaries. 6676
- quinazoline derivatives. 3864
- run-off, Monterey Bay. 7463
- soil reagents, molluscicides. 6095
- toxicity to tadpoles, *Pseudacris*, *Bufo*. 7164
- N-tritylmorpholine, impoundments. 7848
- underwater fungicides, bactericides. 9126
- uptake metabolism and elimination, DDT, *Carassius auratus*. 6446
- water analysis. 6651
- Petalomera wilsoni*, larvae, New Zealand. 3373
- Petalonia debilis*, plasmalemmasomes in sporelings. 4702
- Petalonia fascia*, life history and iodine nutrition. 1072
- Peterynotus (Purpurellus) macleani* sp. n., Gulf of California. 2771
- Petricola pholadiformis*, boring and burrowing mechanisms. 7891
- Petrobiona massiliiana*. 6870, 6882
- Petrocephalus*, osteology. 4444
- Petrochirus diogenes*. 5863
- Petroderma*. 6782, 7530
- Petroleum**,
 - and oily taste of trout. 2430
 - disposal. 2436
 - effect of extraction on resources, North America. 5176
- Petrolisthes*. 4022, 6978
- Petrolisthes armatus*, larval development. 3374
- Petrolisthes eriomerus*, California. 4021
- Petrolisthes marginatus*, Tobago. 4021
- Petrolisthes teres*, distribution, India. 4074
- Petromyzon fluviatilis*. 8945
 - responses to adjuvant injection. 7254
- Petromyzon marinus*. 6721
 - biosynthesis of adrenalin in heart. 7255
 - distribution, Gulfs of Riga and Finland. 8875
 - effects of intestinal extracts on rat pancreas secretions. 8876
 - eyes. 5203
 - glucose production by meninges. 4292
 - histology of endocrine pancreas. 8066
 - larvicides, Michigan. 4291
 - mitotic chromosomes. 6361
 - opisthonephric kidney study. 4289
 - opisthonephric kidney, tubular nephron. 4290
 - osmoregulation in hyperosmotic solutions. 8064
 - physiology, Lake Michigan. 5204
 - presence of corticosteroids. 5201
 - renal functions. 5204
 - synaptic axoplasm in central nervous system. 8874
 - ultrastructure of primary spectacle and cornea. 8067
- Petropedetes natator*, reproduction and ecology, Sierra Leone. 302
- Petroscirtes mitratus*. 8163
- Petrosia dura*, feeding, *Peltodoris atromaculata*. 4129
- pH,
 - and quality of *Ostrea lutaria*. 2801
 - effect on diatom communities. 539
 - effect on ECG, teleostei. 8079
 - effect on peat-bog plants. 2562
 - effect on Unionidae. 2787
 - Norwegian lakes. 1695
 - tolerance, *Daphnia pulex*. 1212
- Phacellophora**. 4833
- Phacops fecundus*. 7833
- Phacops schlotheimi*. 7833
- Phaeaster pascheri*, re-examination in culture. 544
- Phaenomonas cooperae* sp. n., Gilbert Islands. 6373
- Phaeocystis poucheti*, ecology and culture. 5679
- Phaeodactylum*. 5504
- Phaeodactylum tricornutum*,
 - changes in absorbance spectrum on modification of protein. 8320
 - effect of salinity of amino acids. 1767
 - excretion of photosynthate. 543
- Phaeophyceae*, 4579-4582, 5617, 5618, 5622, 7488, 8264
 - chromatographic analysis, amino acids. 3259
 - distribution, Tanzania. 3254
 - ecology and taxonomy, Finland. 6782
 - ecology, Finland. 7530
 - ecology, Greenland. 7529
 - exudates. 3256
 - exudates, formation of humic material. 3257

- Phaeophyceae, contd.**
 Gulf of Mexico. 54
 laminaran content. 1064
 polysaccharides. 6781
 production of sodium alginate. 5625
 strontium. 3833
- Phaeostromatella gen. n.** 3839
- Phaeostromatella elegans gen. et sp. n.** 3840
- Phascolion strombi**, irrigation. 2613
- Phagocata oregonensis**. 3337
- Phagocata vivida**. 4849
- Phagocytosis**, induction in *Amoeba*. 89
- Phakellia**. 4824
- Phakellia flabellata**. 5781
- Phalacrocorax carbo novaehollandiae**, feeding, Otago. 4255
- Phalacrocorax pencillatus**, feeding behaviour, California. 8825
- Phalacrostemma cidariophilum**, embryology. 7708
- Phallusia mammillata**. 7141
- Phaneronodon furcatus**. 5389
- Phanerogamae**. 5618
- Pharetronidae**. 6870
- Pharmaceuticals**, from the oceans. 512
- Pharmacology**, potassium, inactivation, electroplaques, *Anguilla*. 6462
- Phenacovolva labroguttata sp. n.**, South Africa. 7052
- Pheromones**, conditioning, *Carassius auratus*. 3630
- Pherusa capitata sp. n.** 3967
- Phialidium mccradyi**, budding. 3328
- Philarius**, taxonomy. 3396
- Philodina**. 3726
- Philine sinuata**, southern New England. 234
- Philoglossa marcusi sp. n.**, British Solomon Islands. 4131
- Philippia**,
 feeding, larvae, metamorphosis. 3448
 systematics, Indo Pacific. 3449
- Philippines**,
Conus gloriamaris. 1981
 Laguna de Bay, *Glossogobius giurnus*. 3681
 Laguna de Bay, morphology of fish gas bladders. 3602
 Laguna de Bay, productivity. 3722
 Lake Lanao, limnology. 3735
 Laurencia. 2546
 Manila Bay, otter trawl fisheries. 3595
- Philometra americana**, parasite of *Parophrys vetulus*, San Francisco Bay. 3341
- Philopotamus montanus**, upstream migrations, Swedish-Lapland. 6086
- Phlyctidium scenedesmi**. 4690
- Phoca**, strontium and calcium, Sea of Okhotsk. 4305
- Phoca hispida**, biometrics of 4 subspp. 337
- Phoca vitulina**, 7223
 distribution, British Columbia. 3548
 exploitation, Scotland. 4263
 temperature effects on enzymes from tissues. 7222
 twins, Scotland. 332
 visual acuity. 8025
 weight and blindness. 4262
- Phocaenoides dalli**, 6310, 7218
 distribution, Japan. 6311
- Phocoena phocoena**, 5159, 6310, 7218
 migrations, Baltic Sea. 4264
 reproduction, North Atlantic. 8829
 skull structure. 5156
- Phoenicopterus**, Tomales Bay. 8827
- Phoenicopterus ruber**, carotene pigment consumption. 8826
- Pholadomya**. 7874
- Pholioides thomasseni**. 8163
- Phormidium**, effect of extracts on growth and development of rice. 529
- Phormidium mucicola**, sensitivity and resistance to antibiotics. 5639
- Phormidium tenue**. 7487
- Phormosoma**, distribution, New Zealand. 4189
- Phoronida**, 8241
 anatomy of nephridia. 4196
- Phoronis**, taxonomy, Sweden. 7928
- Phoronis australis**, taxonomy. 7927
- Phoronis vancouverensis**, functional morphology of digestive tract epithelium. 6196
- Phoronopsis albomaculata**, taxonomy. 2837
- Phoronopsis californica**, taxonomy. 2836
- Phosphagen kinase**, immunochemistry. 1233
- Phosphatase**, 3886
 specific for phosphorylated histones and protamine. 1739
- Phosphates**,
 absorption, effects of arenate, *Chlorella*. 4656
 carboy microcosms. 3149
 determination of soluble orthophosphate. 2461
 in surface waters and detergents. 3133
 inorganic and primary production. 3078
 inorganic, regulation, *Anguilla anguilla*. 2340
 Lake Kinnereth. 3093
 mud, available to algae. 2519
 plankton production. 2384
- Phosphodiesterase**, erythrocytes, frog. 7987
- Phosphoenolpyruvate carboxylase**, *Chlamydomonas reinhardi*. 8334
- Phosphoglucosmutase**,
 heterogeneity. 5605
 polymorphism, *Oncorhynchus nerka*. 8918
- Phospholipase**, *Porphyridium cruentum*. 6792
- Phospholipids**,
 biosynthesis in *Homarus americanus*. 1913
 distribution in *Lymnaea stagnalis*. 2003
- Phosphomonoesterase**, liver, *Oryzias latipes*. 9039
- Phosphorus**,
 absorption, *Zostera marina*. 5820
 accumulation, distribution, *Mytilus*. 8681
 algal division rate dependence. 4489
 assimilation, in algae, effects of light intensity. 2507
 bioassays with algae and aquatic weeds. 1033
 content, *Cyclotella*, *Thalassiosira*. 4622
 effect of elemental P on *Clupea harengus* L-cells in culture. 5592
 excretion by phytoplankton. 5504
 inorganic, Lake Kinneret. 2362
 nutrition, *Microcystis*. 5635
 requirements, *Cylindrotheca*, *Cyclotella*. 4624
 seasonal variations, *Cirrhinia mrigala*, juvenile. 4361
 toxicity to marine organisms. 4555
 uptake, *Cyanophyceae*. 5634
- Phosphorylase**,
 and AMP, activity in frog stomachs. 311
 estimation, *Trachurus*. 3576
 heart, effect of 5HT, *Lymnaea stagnalis*. 2784
- Phosphorylation**, with chloroplasts from *Bumilleriopsis filiformis*. 17
- Phosphotransferase**, protein sequences. 4931

- Photobacterium fischeri**, bioluminescence and radiation response. 7575
- Photography**,
aerial, coastal ecology. 3161
ciliary movement, *Mytilus edulis*. 7086
high-speed cinematography, ciliary movement. 6699
light meter, underwater. 2447
Oncorhynchus nerka, scales. 6417
Penaeus. 6045
Penaeus duorarum. 6041
swimming mechanisms, *Nereidiformes*. 6920
time lapse, micromeres, sea urchin. 7122
water flow, baffled inclined surface. 4591
- Photokinesis**, affected by desapidin and DCMU in *Cyanophyta*. 528
- Photometer**,
for mapping of bioluminescent dinoflagellates. 1802
underwater. 2446
- Photometric analysis**,
pigments, *Chlorella pyrenoidosa*. 5710
plankton bioluminescence. 5480
- Photoperiod**,
Carassius auratus. 5324
effects of changes on *Chlorella vulgaris*. 3825
- Photophores**, *Porichthys notatus*. 1648, 1649
- Photophosphorylation**, with chloroplasts from *Bumilleriopsis filiformis*. 17
- Photopigment synthesis**, in *Rhodospirillum rubrum*. 74
- Photoreceptor**,
pineal organ, *Plecoglossus altivelis*. 3616
ultrastructure of eye-spot of *Glenodinium foliacium*. 3850
cholinergic inhibition of crayfish. 1923
Hermisenda crassicornis, morphology. 4121
light adaptation in, *Procambarus clarki*. 204
membrane, *Balanus*. 672
- Photosynthesis**, 4606, 5685, 7489
absence of fluorescence quenching in photosynthetic mutant of *Euglena*. 583
Acetabularia, influence of red and blue light. 3224
action spectrum, *Euglena gracilis*. 4737
adaptation to infra red in *Chlorella*. 1062
Antarctic lakes. 3100
assimilation of products by coral reef. 7676
Bangia fuscopurpurea. 8379
Ceratophyllum, *Nitella*, *Fontinalis*, *Potamogeton*, *Cabomba*. 5813
changes, *Padina arborescens* spore formation. 3262
character variation, *Skeletonema costatum*. 5685
Chlorella. 7518
Chlorella ellipsoidea. 7513
Chlorella pyrenoidosa. 5712
Chlorella pyrenoidosa, effect of hydroxymethane-sulphonate. 3824
chlorophyll a forms in purified reaction centres, *Anabaena*, *Scenedesmus*. 8300
Chlorophyceae. 5697
chloroplast, genetic functions, *Chlamydomonas*. 3232
chloroplasts of *Acetabularia mediterranea*. 547
CO₂-fixation, *Chlorella*. 6758
Coccolithus, *Hymenomonas*. 4617
Cyanophyceae. 1751
Dictyopteris memtanacea and *Fucus virsoides*. 3838
effect of different N₂ sources of photosynthetic products in *Scenedesmus*. 1057
effect of light intensity on thermal algae. 1738
effect of polarized light on photosynthesis, *Lemna* leaf cells. 6823
effect of UV-radiation, *Chlorophyta*. 4684
effected by copper in *Chlorella*. 1044
electron carriers, *Chlamydomonas reinhardtii*. 4653
electron transport, algae. 5621
electron transport, *Chlamydomonas reinhardtii*. 4652
Euglena gracilis. 7553
fate of assimilated ¹⁴carbon in *Cyanophyceae*. 1031
ferredoxin in photophosphorylation, *Anacystis nidulans*. 5632
fixation of molecular nitrogen, *Trichodesmium*. 7492
fixation of phycobiliproteins to membranes. 5751
free space, in *Fucus virsoides* and *Laminaria*. 1068
functional site of manganese, *Euglena gracilis*. 4738
hydrostatic pressure effects, algae. 4588
insensitivity to UV-light, *Euglena*. 7549
intermediates, *Acetabularia mediterranea*. 4638
light dependence, *Nitella*. 5723
light-induced changes in membrane potential, *Nitella*. 5724
light-induced proton uptake, *Dunaliella parva*. 4669
macrophytes in hard water lakes. 2560
mutations, *Scenedesmus*. 4682
mutations, *Scenedesmus*, *Anabaena*. 4683
naturally occurring population of *Oscillatoria agardhii*. 1755
nitrate assimilation inhibition by uncouplers. 5693
optimum use of radiant energy, algae. 4595
oxidation-reduction potentials intermediates, *Porphyra*, *Porphyridium*. 8387
oxygen production, polluted estuary. 2416
photo-related aging in *Spirodela oligorrhiza*. 3872
photosynthetic transients in *Chlorella*. 1049
Phragmites communis. 4791
phytochrome dichroism, *Mougeotia*. 7521
phytoplankton, *Kuroshio*. 5501
pigment accumulation, *Skeletonema costatum*. 3813
Porphyra tenera. 6791
potential, *Scenedesmus*. 3241
production, *Chlorophyta*. 4632
production of hydrogen, *Scenedesmus*. 5728
properties of a mutant str of *Chlamydomonas* lacking chloroplast membrane stacking. 563
regulation, *Chlorella pyrenoidosa*. 6759
regulation of glycolate oxidoreductase, *Chlamydomonas mundana*. 7506
respiratory sites in *Nostoc sphaericum*. 3798
Skeletonema costatum. 3813
temperature effects, flora. 5813
thermal adaptation in *Chlorella* and *Pseudochlorella*. 1048
TTC, dye, *Laminaria japonica*. 7533
Zooxanthellae, *Coelenterata*. 7668
- Photosynthetic pigments**, see **Pigments**, and under specific pigment name.
- Phototactic reaction**, in *Daphnia magna*. 1878
- Phoxinus phoxinus**,
food of *Perca fluviatilis*, Windermere. 4423
hypothalamo-hypophyseal system. 418
- Phragmatopoma lapidosa**, biochemistry. 1874
- Phragmites**. 3869, 4775, 4776, 8423
- Phragmites communis**, photosynthesis, Neusiedler See. 4791
- Phreodrilus tanganyikae** sp. n., Africa. 4869
- Phrygiopilus chuacusensis** gen. et sp. n., Guatemala. 4962
- Phrynobatrachus alleni**. 3944
- Phrynobatrachus liberiensis**. 3944
- Phrynobatrachus plicatus**. 3944

- Phrynomerus bifasciatus**. 7946
- Phrynops wermuthi** sp. n., Peru. 784
- Phyacophila**. 4977
- Phycis**. 5221
- Phycocolloids**, biosynthesis, Rhodophyceae. 4598
- Phycoerythrins**, spectroscopic studies with special reference to phylogenetical relations. 1020
- Phycology**, lyophilization. 8261
- Phycomyces blakesleeanus**, crystalloids. 606
- Phycomycetes**, 4751
- Bassin D'Arcachon, France. 1130
- cultivation. 5806
- North Sea and North Atlantic. 1121
- tissue culture chamber. 3304
- Phyllactis**, burrowing behaviour. 8474
- Phylladorhynchus** gen. n. (Galatheidæ), Japan. 8557
- Phyllaplysia taylori**, autoradiography and phase contrast study, spermatogenesis. 7869
- Phyllaria**. 5734
- Phyllidia soria**. 8642
- Phyllidia tula**. 8642
- Phyllobothrium foliatum**. 8483
- Phyllochaetopterus**. 7440
- Phyllocyla**. 7001
- Phyllodoce**, role of proboscis. 5937
- Phyllodoce mucosa**. 6926
- Phyllodoce vittata**. 6926
- Phyllogomphoides**. 7001
- Phylomedusa**,
breeding behaviour, Mexico. 7163
phyllocaerulein, in ectoderm. 7162
- Phyllophora nervosa**. 5626
hordenine. 1082
- Phyllopoda**, from the Ennedi, Chad. 668
- Phyllosoma** larvae, see larvae.
- Phyllospadix**. 6728
- Phylogeny**, (see also Evolution) 3957
adrenergic innervation of iris and ciliary structures. 1736
blood platelets, frog, silver carp. 7967
Centrarchidae. 8158
Crustacea. 173
Cyanophyceae. 8292
Cyprinidae. 8933
Dasycladales. 3828
Lucinidae, Fimbriidae. 7082
Lycoptera. 7275
monamines in hypothalamus, Entosphenus, Leucopsarion. 6355
Nassellaria, Radiolaria. 6854
neoplasms. 6327
Pogonophora. 7136
quantitative phyletics and evolution, Anura. 5070
Salmonidae. 8091
significance of polyunsaturated fatty acids in aquatic fungi. 78
sinistral fluanders, Japan. 7412
Spongillidae. 6869
- Phyllyctidium anatropum**. 5800
- Physa**,
control, Lepomis. 3451
parasite, Trichodina. 4823
- Physa acuta**,
influence of salinity of water. 3450
nervous system anomalies. 5010
- Physa heterostrophia**, 9064
synonymies. 2768
- Physa striata**, taxonomy of complex. 2768
- Physa virgata**, synonymies. 2768
- Physalaemus**, morphology. 6234
- Physalia**, Japanese waters. 3932
- Physalia physalis**, distribution of absorbing compound. 3329
- Physeter catodon**, 5159, 7218
age growth and mortality, South Africa. 4266
distribution and movements, South Africa. 4265
feeding. 2911
karyotype of male. 6314
- Physetocaris microphthalmia**,
distribution. 3376
distribution, North Atlantic. 3375
early records. 3376
- Physical activity**, diurnal rhythm, Anodonta cygnea. 7067
- Physical composition**, Sphagnorubin, Sphagnum magellanicum. 5817
- Physical limnology**, water conductivity, Brazil. 5528
- Physical oceanography**,
anomaly, South West Africa Coast. 4526
Bering Sea. 5519
Cananéia. 6646
Gulf of California. 9075
hydrodynamic depressor. 4563
isotherm maps, New South Wales. 6535
Narragansett Bay, Rhode Island. 5770
probe for digital and analogue analysis. 5598
upwelling, Gulf of Guinea. 6627
water of Constanza (Black Sea). 4529
water transparency, Indian Ocean. 5563
- Physiological gradients**, in Planaria. 1184
- Physiology**, (see also Biochemistry, Enzymes)
5685, 7757
ability to survive in Jupiter-atmosphere, Elodea. 6820
absorption of U-[¹⁴C]-labelled nutrients, Orconectes limosus. 7789
acetate metabolism, Chlorella protothecoides. 6757
acetylcholine action in presence of organophosphates, lobster. 6019
acid effects on phosphate uptake and ATP-level, Scenedesmus. 5727
acid secretion, Rana catesbeiana. 7978
acid soluble nucleotides, nucleosides and bases, Ommastrephes sloani pacificus. 7102
Acrothoracica. 4016
action of adrenalin and ACh, heart, Rana pipiens. 8778
action of glucose and hormones, brain, Rana ridibunda. 7990
adaptation, Chlorella pyrenoidosa. 6761
adaptations to oxygen-deficient waters, Pisces. 7394
adaptations to viviparity, Viviparus. 7056
aestivation, Bulinus nasutus. 8652
algae. 8293
alimentary organs, Mugil corsula. 7405
amino acid composition, Penaeidae. 6983
amino acid pools of parasitic cestodes, Massachusetts. 8483
amino acid sequences, dogfish. 7260
ampullary organs, Gnathonemus petersii. 5451
anaphylactic reactions, Cephalopoda, fish, frogs. 8686
anaphylatoxin-forming system, plasma, Anguilla. 8194
angiotensin effect on heart rate, turtle. 6292
antibodies, Anguilla anguilla. 8197
antidiuretic hormones, bladder, Rana esculenta. 8765

Physiology, contd.,

- D-arabinose, Porifera. 7662
 arginine vasotocin, *Protopterus aethiopicus*. 8214
Artemia salina. 7713
 ascorbic acid synthesis, *Triturus cristatus*. 8784
 assimilation of n-alkanes, *Pseudomonas*. 8414
 ATP:arginine phosphotransferase, *Homarus vulgaris*. 8583
 ATPase activity, gastric mucosa, *Bufo spinulosus*. 7957
 auditory, Reptilia. 6293
 bacteria, Aral Sea. 5784
 bacterial uptake of organic substrate. 3293
 biochemical analysis of cell aggregation, Porifera. 6876
 biogenic amines and nicotine effects on blood pressure, Pisces. 7238
 bioluminescence. 6719
 bioluminescence, Apogonidae, Philippines. 8985
 bioluminescence, *Renilla reniformis*. 6895
 biosynthesis, crassin acetate, *Pseudoplexaura porosa*. 8475
 biosynthesis of δ -aminolaevulinic acid, *Chlorella*. 8341
 biosynthesis of bufadienolides, *Bufo marinus*. 7955
 biosynthesis of 18-hydroxycorticosterone, adrenocortical tissue, Teleostei. 7346
 biosynthesis of macromolecules, dogfish. 6368
 blood analyses, Pisces, Texas Coast. 7270
 blood cells, *Callinectes sapidus*, parasitized and unparasitized. 6964
 blood counts, *Esox lucius*. 7274
 blood counts, Labeo, Cirrhina, Catla. 6471
 blood pH, *Ictalurus punctatus*. 6469
 blood pressure active factors, *Bufo arenarum*. 8747
 blood pressure regulation, Pisces. 7239
 blood protein polymorphism, *Sprattus sprattus*. 6439
 brackish water fishes. 9071
 brackish water invertebrates. 9071
 brain stimulation of tectum. 5378
 calcium ions as inward current carriers, neurones, Planorbis, Limnea. 7051
 carbohydrase activity, Crustacea. 6934
 carbohydrate metabolism, *Prymnesium parvum*. 5683
 carbohydrate metabolism, *Skeletonema costatum*. 3714
 carbohydrate metabolism, supercooled *Fundulus heteroclitus*. 6557
 carbon monoxide promoting effect on sporocarp formation, *Salvinia natans*. 5815
 cardiac output, *Cyprinus carpio*. 5333
 carotenoid, *Aurelia aurita*. 5861
 carotenoid in diet, *Phoenixopterus ruber*. 8826
 carotenoid metabolism, *Pinnotheres pisum*. 3377
 carp. 8120
 catabolism, trimethylamine *Pseudomonas*. 3299
 catalase activity, digestive gland, freshwater bivalve. 6129
 caudal neurosecretory system, *Ictalurus* sp. 7332
 CCCP effect on anion uptake, *Limnophila*, Chara. 5696
 cell response to chloride- and sulphate-enriched media, gills, *Gambusia*, Catla. 6560
 cells, *Coccolithus huxleyi*. 8313
 cellular adrenocorticotropin, Cyprinidae. 8934
 cellular potentials, isolated spinal cord, frog. 7189
 cellulose excretion, *Achlya ambisexualis*. 6819
 changes in corpuscle of Stannius during spawning journey, Atlantic salmon. 8925
 changes in sex ratio, *Limanda aspera*. 9035
 characterization of steroid glycoside, *Marthasterias glacialis*. 6179
 chemotropism, invertebrates. 5823
Chlamydomonas. 1041
 chloramphenicol effect, *Polytomella caeca*. 5725
Chlorella pyrenoidosa. 5712
Chlorella vulgaris, effects of dipyrldyl diquat on gas exchange. 4664
 chloride electrochemical potential, Nitella. 5722
 chloride regulation, *Moringua linearis*. 4463
 chromatographic analysis of serum proteins, *Macropipus puber*. 6975
 Chrysophyceae. 4617, 5642, 6740
 CO₂ fixation, *Chlamydomonas reinhardtii*. 5699
 Coelastrum. 5719
 coelomic cell haemoglobin, *Glycera dibranchiata*. 8527
 composition of carotenoids, *Actinia equina*, North Sea and Adriatic. 6890
 composition of cellular envelopes, *Anabaena cylindrica*. 6736
 conduction mechanism in bipolar cells, retina, frog. 8799
 contractile vacuoles, Amoeba. 7631
 control of chloroplast senescence in detached leaves. 8424
 conversion of β -carotene into canthaxanthin, *Artemia salina*. 5948
 cornea, *Rana catesbeiana*. 7977
 Craspedacusta sowerbyi. 4841
 creatine kinase, *Marphysa sanguinea*. 8430
 current separations in Myxicola giant axons. 5940
 cyclic activity in digestive diverticula, *Lasaea rubra*. 7884
 cyclitols in Monochrysis lutheri. 6743
 cytophotometric analysis, neurosecretory preoptico-hypophysial system, Teleostei. 8887
 degeneration of chloride cells, *Anguilla japonica*. 4442
 degradation of lactate dehydrogenase by frog eggs. 5112
 degradation of undecane, *Pseudomonas*, North Sea. 8415
 demonstration of hydrochloric acid in gastric tubules, Teleostei. 7354
 dependence, membranes, potassium, sodium, Nitella translucens. 7522
 detection of 2-aminoethylphosphonic acid, phospholipids, *Cyclograpsus punctatus*. 8576
 developmental at pattern-formation, *Ephydatia fluviatilis*. 3906
 developmental, Spongillidae. 6879
 dichlorophenoxyacetic acid effects on ultrastructure, *Chlorella*. 4662
 differential blood flow to afferent branchial arteries, *Raja rhina*. 7258
 digestion in *Haliotis rufescens*. 6111
 digestive system, *Asplanchna sieboldi*. 5923
 distribution of soluble proteins in lenses, vertebrates. 7269
 diving, *Cinclus mexicanus*. 8819
Echinocardium cordatum. 7113
 ecological, *Cordylophora caspia*, Baltic canals. 4839
 ecological, *Leucothrix mucor*. 4770
 ecophysiology, *Homarus gammarus*. 6021
 effect of aerobic and anaerobic conditions on growth and metabolism. 7490

Physiology, contd.,

- effect of aldosterone on sodium transport, *Rana temporaria*. 7994
- effect of amitrol on chloroplasts structure, *Poteriochromonas stipitata*. 6746
- effect of calcium on excitatory neuromuscular transmission, *Procambarus mexicanus*. 8602
- effect of cerebellectomy on plasma level of catecholamines, *Scyliorhinus canicula*. 7263
- effect of cycloheximide, energy metabolism in *Euglena gracilis*. 5762
- effect of dipyrldyl diquat, metabolism, *Chlorella vulgaris*. 6763
- effect of fatty acids, *Ambystoma tigrinum*. 3503
- effect of ganglion extirpation on leucine incorporation, *Littorina littorea*. 7041
- effect of hormones, *Tilapia mossambica*. 9004
- effect of hydroxyurea on maturation, egg, *Artemia salina*. 7716
- effect of hypertonic solutions of contractions. 7178
- effect of hypophysectomy and temperature acclimation on metabolism, *Umbra limi*. 7298
- effect of increased oxygen tension, sciatic nerve. 6245
- effect of intestinal extracts on lampreys on pancreas secretion in rat. 8876
- effect of ligands on methaemoglobin, *Lampetra fluviatilis*. 7253
- effect of low pH on blood pH and sodium balance, *Salvelinus fontinalis*. 6436
- effect of methallibure, *Poecilia reticulata*. 8213
- effect of nitrogen source on dehydrogenases, *Chlorella*. 7514
- effect of *Periplaneta* neurohormone D on *Lymnaea stagnalis* visceral ganglion. 7047
- effect of pinealectomy, bilateral enucleation on phototactic response, *Carassius auratus*. 5322
- effect of prolactin injections, *Fundulus kansae*. 9031
- effect of propionate and other organic ions of sodium transport across toad bladder. 5082
- effect of steroids on secondary sexual characteristics, *Oryzias latipes*. 7411
- effect of temperature change on membrane potential and conductance, giant nerve, *Aplysia*. 8648
- effect of tetrodotoxin on giant axon, *Loligo pealei*. 7099
- effect of tetrodotoxin on presynaptic terminals, *Loligo vulgaris*. 7100
- effect of α -tocopherol deficiency, *Cyprinus*. 8956
- effect of X-irradiation on DNA synthesis, cell proliferation, intestine, *Carassius auratus*. 6445
- electric organ, *Electrophorus electricus*. 7325
- electric organs, *Pisces*. 8848
- electrical activity of nerves, *Anodonta cygnea*. 7072
- electrical activity of neurons, crayfish. 5994
- electrical responses, *Spirostomum*. 7645
- electrical transmission among neurons, buccal ganglion, *Navanax inermis*. 6121
- electrocardiogram, *Tursiops truncatus*. 8032
- electron transport, algae. 5621
- electron transport system of κ -particles. 8451
- electrophysiology, labyrinth, *Lampetra fluviatilis*. 6357
- electrophysiology, squid stomach. 3486
- epileptic focus in forebrain, *Testudo graeca*. 8812
- endopeptidases, *Astacus*. 6961
- endopeptidases, *Sepia officinalis*. 6161
- environmental control, sensitivity, interneurons. 6990
- enzyme activity, *Rana esculenta*. 8766
- enzyme induction, *Chlorella pyrenoidosa*. 7516
- enzyme variation between syngens, *Paramecium aurelia*. 7640
- enzymes, *Clupea harengus*, North Sea. 6385
- enzymes, mercury, lobster. 4932
- enzymes of peroxisomes, liver and kidney, *Amphibia*. 7175
- enzymes, *Rhinichthys*. 5345
- enzymes, *Salmo*, *Coregonus*. 8107
- enzymes, *Salmonidae*. 8090
- esterase polymorphism, *Clupea harengus*. 8094
- evolution of haemolymph proteins, *Carcinus maenas*, during oogenesis. 6966
- excision of methylguanine from DNA *Euglena gracilis*. 5761
- excitatory and inhibitory effects of acetylcholine, *Crassostrea*, *Mytilus*. 7881
- exopeptidase, *Gammarus*, *Asellus*. 6971
- experimental modification reaction pattern, *Lemna* leaf to polarized light. 6823
- Exuviaella cordata*. 1796
- factors affecting serum glucose levels, *Carassius auratus*. 6448
- fast paramyosin muscle, *Branchiostoma*. 3500
- fate of exogenous marinobufagin, *Bufo marinus*. 7956
- fate of thyroxine iodine, *Rana pipiens*. 7172
- feeding behaviour, bilateral ablation, *Panulirus argus*. 4957
- ferredoxin as cofactor in photophosphorylation, *Anacystis nidulans*. 5632
- ferredoxin-catalyzed reactions, *Bumilleriopsis filiformis*. 8311
- fish actomyosin ATPase activation by lecithin. 8851
- fluctuation in erythrocyte number, *Pisces*. 8082
- fluctuation of leucocyte number. 8081
- fluxes across epithelia, frog. 8802
- food conversion, *Seriola*, *Chrysophrys*, *Pneumatophorus*. 6526
- formation of atypical chlorophyllide, *Chlorella protothecoides*. 6760
- freezing point depressions of glycoproteins, *Trematomus borchgrevinki*. 9008
- functional organization, vestibular afferents, brain, frog. 7968
- GABA in fish erythrocytes, *Pleuronectes*. 6580
- GABA, nervous system, lobster. 8566
- galactosyl diglyceride, *Chlorella vulgaris*. 8351
- gastric hyaluronidase, *Scomber japonicus*. 7371
- giant axon, *Dosidicus*. 5035
- giant axons, *Myxicola*. 5939
- Glaucosphaera vacuolata*. 8304
- Glossobalanus crozieri*. 8727
- glucose and amino acid metabolism, *Invertebrata*. 7097
- glucose catabolic pathway, *Cichlasoma bimaculatum*. 8986
- glucose metabolism, *Chlorella protothecoides*. 6756
- glutamic acid decarboxylation, *Chlorella*. 8347
- glycanes, cornea, *Scyliorhinus canicula*. 6369
- glycollate pathway, *Chlorella pyrenoidosa*. 7517
- glycosaminoglycans in nonswelling corneal stroma, *Squalus acanthias*. 8884
- growth of aquatic Oomycetes on amino acids. 8418
- gut mucous cells, *Echinoidea*. 8700
- haemoglobins, *Arenicola marina*. 8526

Physiology, contd.,

- haemoglobins, sedimentation behaviour, Amphibia. 8768
- haemolymph proteins, *Carcinus maenas*, moulting. 6965
- heart blood supply, Pisces. 8854
- heterocyst germination, *Gloeotrichia ghosei*. 8305
- heterogeneity of phosphoglucosyltransferase. 5605
- histidine deaminase, Scomber, *Pseudomonas*. 6521
- histochemical localization, cholinesterases, Doridae. 7027
- histochemistry, cytosomal lipids, neurons, *Anodonta cygnea*. 7069
- histochemistry of mucus, *Anguilla japonica*. 5431
- histochemistry, skin glands, *Rita rita*. 6480
- histones, embryology, *Arbacia punctulata*. 8706
- histophysics, bone, *Anguilla anguilla*. 5435
- histophysiology, renal cells, Gastropoda. 8646
- hormone-induced capacitance changes in skin, frog. 7176
- hormones, *Orconectes virilis*. 7790
- 5HTP-DOPA decarboxylase in nervous system, *Anodonta cygnea*. 7063
- 5-HTphan-decarboxylase activity. 6055
- hydrogen-deuterium exchange, sperm whale metmyoglobin. 8837
- hydrogen evolution, *Chlamydomonas moewusii*. 4649
- hydrostatic pressures in heart, *Patella vulgata*. 7868
- hydroxyprogesterone conversion to androstenedione, *Xenopus laevis*. 6283
- hyperpolarization phase, receptor potential, frog isolated muscle. 6244
- immobilization antigen synthesis, *Paramecium aurelia*. 8450
- immunogenetic analysis, blood groups, *Engraulis mordax*, Black Sea and Sea of Azov. 6392
- in vitro transformation of steroids, *Salmo gairdneri*. 6429
- incorporation of amino acids into eggs, sea urchin. 7124
- incorporation of thymidine into sea urchin eggs. 7125
- indicator species for water quality. 5826
- induced spawning, *Centropomus striatus melanus*. 7351
- induction of valvulae formation, *Cyclotella cryptica*. 5667
- influence of aerial breathing, on metabolism, *Lepisosteus*. 8208
- influence of eyestalk extract on carbohydrates in haemolymph, *Orconectes limosus*. 8588
- influence of stimulants on acid secretion, stomach, frog. 7969
- influence of stress on catecholamine levels in axillary bodies, *Scyliorhinus canicula*. 7261
- influence of the rhopic factor, *Cyprinus carpio*. 8960
- inhibition by tapeworm, of intestinal enzymes, Pisces. 8509
- integumentary tissue, moulting hormone, *Orconectes limosus*. 6977
- interrenal and water and electrolyte metabolism, *Anguilla*. 8195
- interrenal corticosteroidogenesis, *Anguilla anguilla*. 3686
- intestinal ATPase, *Carassius auratus*. 5328
- intrinsic cardiac rate regulation, *Heterodontus*, *Platyrrhinoidis*. 8881
- iodine metabolism, *Nereis diversicolor*. 8533
- ion and water transport, *Limonium vulgare*. 4787
- ion movements, antennal gland, *Austropotamobius*. 6962
- ion movements in cell injury, toad. 7952
- ionic fluxes, *Griffithsia*. 6789
- ionic properties of gills, *Artemia salina*. 6936
- iron metabolism, *Elliptio complanata*, Ottawa. 5018
- isolated spinal cord, frog. 7975
- isolation of dithiothreitol from fertilization membrane. 6181
- lactate dehydrogenase, anaerobiosis, *Pseudemys scripta*. 3535
- lactate dehydrogenase, eye, *Xiphophorus helleri*. 8217
- lactate dehydrogenase isozymes, *Salvelinus*. 8092
- lactic dehydrogenase isozyme patterns, Crustacea, North Carolina. 8553
- Lampetra*. 6360
- leak current rectification in *Myxicola* giant axons. 5941
- light-dependent oxygen system, *Anabaena variabilis*. 4606
- light effects, *Euglena*. 7548
- light-induced changes in thylakoid membrane, *Ulva*, *Porphyra*. 5731
- light-induced β -1-3-glucan breakdown, chloroplasts differentiation, *Euglena gracilis*. 8398
- light-induced potential changes, measurement, *Nitella translucens*. 8360
- light-induced proton uptake, *Dunaliella parva*. 4669
- lymph hearts, *Triturus* spp. 5134
- macrocytic anaemia, *Salvelinus fontinalis*. 7293
- make-and-break responses, *Anodonta*. 7064
- malate dehydrogenase isozymes, vertebrates. 8126
- malathion uptake, *Cyprinus carpio*. 5332
- malic dehydrogenase, isocitric dehydrogenase. 8011
- manganese-deficiency, *Euglena gracilis*. 4736
- Margaritifera margaritifera*. 5022
- marine fishes. 9071
- marine invertebrates. 9071
- mechanoreceptors, *Ensis directus*. 7079
- metabolic hormones, *Biomphalaria sudanica*. 7031
- metabolism and elimination of DDT, *Carassius auratus*. 6446
- metabolism control, gill, *Paralithodes*. 6038
- metabolism of mammals, Polar regions. 7619
- methane-oxidizing bacteria, Pluss Lake. 3292
- methylglucose uptake, *Chlorella*. 5713
- mineral balance, *Anguilla anguilla*. 7387
- monogalactosyl diglyceride metabolism, *Chlorella vulgaris*. 8350
- morphine metabolism and tolerance, *Carassius auratus*. 8942
- motor functions and anatomical basis in brain, *Caiman sclerops*. 8805
- motor patterns, parental contact, *Etmopterus maculatus*. 8988
- movement receptors, *Carcinus minus*. 8571
- muscle aldolase, *Esox*. 6398
- muscle cell permeability, *Balanus nubilis*. 4902
- muscles, frog. 8794
- myoglobin composition, dolphin. 6313
- myoneural junctions, frog. 7192
- Mytilus edulis*, culture. 6147
- NAD, kinetics during dark-light transient, *Chlorella*. 5709
- NAD, lobster. 4933
- neural stimulation of spawning, *Asterias amurensis*. 6170

Physiology, contd.,

- neuroendocrine organs, *Nephtys*. 8532
 neuromuscular junction, transmitter, *Rana pipiens*. 8771
 neurosecretion, *Argulus foliaceus*. 6942
 neurosecretion, *Lethocerus indicum*. 7831
 new type of compound eye, *Dytiscus*. 8624
 nitrate reduction, *Chlorella*. 5714
 nitrite reductase, *Dunaliella tertiolecta*. 6766
 nitrogen fixation, *Anabaena cylindrica*. 8298
 nitrogen metabolism, *Ochromonas malhamensis*. 8319
 nitrogen metabolism, *Spirodela oligorrhiza*. 3311
 nitrogenase activity, *Plectonema boryanum*. 8307
 node of Ranvier, frog. 7983
 oestrogen in plasma, *Rana esculenta*. 8765
 oestrogen interconversions, eggs, *Dendroaster excentricus*. 6176
 optic tectum nerve fibre regeneration, *Carassius auratus*. 8939
 organ-specific RNA, brain, *Oncorhynchus nerka*. 6410
 oscillation and repetitive firing in axons, squid. 6157
Oscillatoria rubescens. 476
 osmoregulation, bladder, *Bufo marinus*. 7954
 osmoregulation, bladder, *Pseudemys scripta*. 7203
 osmoregulation, *Buccinum undatum*. 7851
 osmoregulation, Characeae. 6751
 osmoregulation, *Crangon septemspinosa*. 7759
 osmoregulation, Crustacea. 7753
 osmoregulation in thermally acclimated *Cyprinus carpio*. 8959
 osmoregulation, ion movements in cell injury, toads. 7952
 osmoregulation, *Libinia emarginata*. 8584
 osmoregulation, *Ligia* spp. 8585
 osmoregulation, *Limnaea stagnalis*. 7865
 osmoregulation, *Salmo salar*. 7288
 osmoregulation, yellow-tail. 8981
 ovary, *Poecilia reticulata*. 5468
 oxidation-reduction potentials of photosynthetic intermediates, *Porphyra*, *Porphyridium*. 8387
 oxidative metabolism, of rotenone, Pisces. 8936
 oxygen consumption by microflora. 8402
 oxygen consumption, *Littorina*, *Mytilus*. 7867
 oxygen consumption, temperate and tropical benthic fish. 8192
 oxygen consumption, *Unio pictorum*. 8685
 palmitic acid, *Cyprinus carpio*. 7316
 pancreatic enzymes, *Protopterus aethiopicus*. 7415
 pars intermedia, *Xenopus laevis*. 6276
 permeability of eye lens capsule of *Thunnus obesus* to nuclear eye lens proteins. 7381
 pH-dependent association of phycoerythrin, *Porphyridium cruentum*. 7542
 Phaeophyceae, exudates. 3256
 phagocytosis and pinocytosis, Spongillidae. 4830
 phosphate absorption, *Zostera marina*. 5820
 phosphate complexes of soluble fish proteins, *Sebastodes melanops*. 9001
 phosphoenolpyruvate carboxylase, *Chlamydomonas reinhardtii*. 8334
 phospholipid composition of myelin isolated from brain and spinal cord. 7965
 phosphorylase activity and its inhibition, *Anodonta cygnea*. 7068
 phosphorylation of phosphoprotein, trout. 5311
 photobiology, *Bangia fuscopurpurea*. 8379
 photoperiod-induced changes, resting potential, chloroplasts, *Nitella*. 8359
 photophosphorylation inhibitors, *Chlorella pyrenoidosa*. 6762
 photoproduction of hydrogen, *Scenedesmus*. 5728
 photosynthesis. 5685
 photosynthesis, Chlorophyta. 4632
 photosynthesis, *Euglena gracilis*. 7553
 photosynthesis, *Porphyra tenera*. 6791
 photosynthesis rates, temperature effects, plants. 5813
 phototactic accumulation, *Euglena*. 7548
Physalia physalis toxin, osmoregulation, frog skin. 7675
 physiological aspects of vertical zonation of marine littoral algae. 1092
 physiological ecology, marine fungi. 4766
 Pisces. 7237
 pituitary-adreno-cortical feedback mechanism, *Anguilla rostrata*. 6547
 Planaria, southern Europe. 6905
 poikilosmosis, isosmosis. 5608
 polar environment. 7619
 polysaccharides, *Tichocarpus crinitus*. 7545
 polytene chromosomes and nucleic acid metabolism, *Euplotes*. 6852
 posing behaviour, *Uca tangeri*. 6996
 post-tetanic potentiation at neuromuscular junction. 7183
 potassium-dependent deplasmolysis, pseudomonad. 6810
 potassium inactivation, *Anguilla*. 6462
 Praslinogenin, *Bohadschia koellikeri*. 7111
 precursors and metabolites of choline esters in hypobranchial glands, *Concholepas*, *Thais*. 6106
 preoptic recess organ, vertebrates. 5615
 primary production, phytoplankton. 9057
Procambarus simulans, light-induced changes. 3378
 progesterone conversion, *Callinectes sapidus*. 6001
 prolactin effects, Teleostei. 6377
 protease assay, sea urchin. 6183
 protein, geographic variations, *Acris*. 6204
 protein metabolism, *Paratelpusa hydrodromous*. 4959
 protein synthesis, *Oryzias latipes*. 7410
 protracted prolactin production, *Triturus cristatus*. 6274
Pythium marinum. 5749
 radial spread of muscle contraction. 6236
Rana temporaria. 5117
 rate of calcification, *Halimeda*, *Cayo Enrique Reef*. 4672
 rate of production, day-time variations, British Isles. 7597
 reactive lysine residue in dehydrogenase, *Homarus vulgaris*. 6973
 reaggregation of cells, Porifera. 8459
 regulation of glycogen metabolism, *Tetrahymena*. 8454
 regulation of neuron composition of cerebellum cortex. 8709
 regulation of photosynthetic carbon, *Chlorella pyrenoidosa*. 6759
 reproductive, *Aequipecten irradians*. 8672
 reputation of PCDV, *Rana pipiens*. 8774
 resistance to tetrodotoxin, sympathetic nerves, *Bufo marinus*. 7154
 resorption of sexual products, Pisces. 8889
 respiration, haemoglobin-free, *Chaenocephalus*

Physiology, contd..

- aceratus, 7352
- respiration rhythms, *Lemna gibba*, 6825
- responses, *Haustoriidae* to environmental factors, 1248
- responses of muscles to sinusoidal length changes, 7186
- responses to temperature, *Cinclus mexicanus*, 8820
- resting potential of slow muscles, effects of solutions, *Rana temporaria*, 7184
- reticular cells, *Procambarus clarkii*, 6989
- reversible denaturation of C-phycoerythrin, 8306
- rhythmogenesis in nerve fibre, *Eriphia spinifrons*, 6015
- ribosomal subunit exchange, *Dictyostelium purpureum*, 7633
- role of polysaccharides in aggregation, *Porifera*, 6875
- role of preoptic-neurohypophyseal system in water balance, *Bufo bufo*, 6214
- role of proboscis, *Polychaeta*, 5937
- role of urinary bladder in water balance, *Ambystoma mexicanum*, 5074
- 'Root effect', *Anguilla vulgaris*, 6548
- Root-shift and Hb, *Anguilla*, 9025
- salicylic acid absorption, *Rana pipiens*, 8777
- salinity tolerance, *Ctenopharyngodon idella*, 7313
- salinity tolerance, *Orconectes rusticus*, 8589
- saturation of S-potentials, retina, 6379, 6380
- seasonal variations, acid-soluble nucleotides, *Oncorhynchus nerka*, 6409
- seasonal variations, meat and glycogen, *Ostrea edulis*, 5028
- seasonal variations, *Mytilicola intestinalis*, 8547
- seasonal variations, nucleic acid contents, *Oncorhynchus nerka*, 6408
- sensitivity of enzymes to irradiation, *Gadus* spp., 8146
- sensitivity to metabolites, *Chlamydomonas* spp., 4648
- Serraticardia maxima*, 4726
- silicon, DNA synthesis, *Cylindrotheca fusiformis*, 4623
- sinus gland extirpation effects, hepatopancreas, *Astacus leptodactylus*, 7757
- skeletal muscle enzymes, *Rana esculenta*, 8767
- skeletal muscle, isometric contraction, *Limulus*, 8635
- skin digestion and epidermal absorption, *Echinocardium cordatum*, Seine Estuary, 7113
- sodium efflux, sartorius muscle, *Rana pipiens*, 7179
- sodium pool transport, skin, frog, 7187
- sodium transport, toad bladder, 7953
- sodium transportation, retina, frog, 7194
- sorbitol dehydrogenase, gene duplication, *Clupea harengus*, 6386
- sorbitol dehydrogenase isozymes, *Pisces*, 8145
- spectral sensitivity, flicker response, *Squilla empusa*, 3381
- spectral sensitivity, *Onchidoris fusca*, 7049
- spectral sensitivity, *Rana catesbeiana*, 8764
- Spongillidae*, 6881
- spontaneous activity in cardioaccelerator nerves, *Astacus pallipes*, 6960
- starch, sugars, *Serraticardia maxima*, 5752
- stimulation and recording from single cells, 8650
- stimulation of gustatory units by calcium, *Rana catesbeiana*, 7165
- stomatogastric nervous system, *Homarus americanus*, 6972
- storage of purines, 7143
- subthreshold behaviour and phenomenological impedance, giant axon, *Todarodes sagittatus*, 7104
- succinic dehydrogenase activity, *Anodonta cygnea*, 7074
- sulphated polysaccharides, *Grateloupia*, 7541
- sulphite reductase activity, algae, 4596
- supercooled *Fundulus heteroclitus*, 5444
- supercooled *Fundulus heteroclitus*, serum organic constituents, 5445
- superprecipitation of actomyosin, carp, 8953
- suppression of extranuclear streptomycin dependence, *Chlamydomonas reinhardtii*, 8335
- swimbladders, *Macrhnathus aculeatus*, 7402
- swimming, *Procambarus clarkii*, 6048
- synchrony in marine phytoplankton, 5500
- taxonomy, *Chlorella*, 3235
- temperature adaptation and phospholipids of membranes, *Carassius auratus*, 6449
- temperature and pressure effects on microflora, ocean, 9046
- temperature dependence of energy transfer efficiency, *Chlorella*, 8349
- temperature effects on enzymes, *Phoca vitulina*, 7222
- temperature effects, *Pisces*, 8037
- temperature exchange, *Tilapia mossambica*, 6530
- temperature influence on oxygen consumption, *Littorina littorea*, 7866
- temperature modulation, adreno-receptors, heart, frog, 7962
- testosterone production, ovaries, *Portunus trituberculatus*, 6988
- tetrahymanol biosynthesis, *Tetrahymena pyriformis*, 7647
- thermo-resistance of muscle, 8429
- thermostable protease, sea urchin larvae, 6184
- thorium dioxide fate, coelom, *Sabellastarte longa*, 7710
- thyroid function in male *Fundulus heteroclitus*, 7393
- tidal rhythm, sodium chloride and endrin susceptibility, 6558
- Tilapia*, 3030
- tissue gas tension, *Salmo*, *Cyprinus*, 7284
- TMAO, decomposition in muscle, *Pisces*, 8850
- toxin-induced ionic transport, frog skin, 7963
- transaminase, *Anguilla*, 5433
- transepithelial fluid movement, antennal gland, crayfish, 8567
- transepithelial potential differences, larval and adult salamander, 5073
- transmitter, catch muscle, *Anodonta cygnea*, 7066
- transmitter release at neuromuscular junction, crayfish, 8561
- transport and retention of potassium, pseudomonad, 6809
- trehalose phosphorylase, *Euglena gracilis*, 7555
- trigeminal mesencephalic nucleus, *Caiman sclerops*, 8007
- Triglyceride formation and hydrolysis, toad bladder epithelium, 6211
- trimethylamine oxide decomposition, muscles, *Pisces*, 8849
- trypsin-like protease, *Astacus leptodactylus*, 8569
- tuberosity organs, *Gnathomemus*, 7398
- turnover time, ethanol, *Carassius auratus*, 8938
- ultimobranchial body, *Salmo salar*, 6433

Physiology, contd.,

- uptake of protective substances from sea anemone by anemone fish. 7348
- urate and PAH transport, *Natrix*. 8010
- urea and osmoregulation, *Malaclemys centrata*. 7202
- ureogenesis, *Chelonia*. 7204
- use of dextran blue to estimate intestinal water volume, *Mugil*, *Chanos*. 9018
- use of trichloroacetic acid for gonadotrophic hormone extraction, spawning populations, *Catla*, *Labeo*, *Cirrhina*. 6450
- utilization of molecular hydrogen, *Chloropseudomonas*. 6811
- vertebrates. 7237
- vestibular organ, *Carassius auratus*. 7303
- visceral ganglion, *Lymnaea stagnalis*, effect of neurohormone D from *Periplaneta*. 8659
- volutin granules in *Zoogloea ramigera*. 6813
- wall development and tetrazolium chloride reduction, heterocysts, *Anabaena ambigua*. 8297
- water solubilization of cholesterol by *Euglena gracilis*. 5759
- wax esters in eggs, *Trichogaster*, *Mugil*. 7875
- zinc accumulation, *Chlorella*. 8344
- zosterinase activity of hepatopancreas, invertebrates, Japan Sea. 8431

Physoderma,

- parasite of *Juncus*. 3305
- parasitic on *Asclepias incarnata*. 2554

Physodon. 4270**Phytal zone,** Amphipoda, ecology, Africa. 4908**Phytanic acid,** in *Euphausia superba*. 1909**Phytobacterium.** 3857, 3858**Phytobius waltoni.** 8614**Phytoplankton, (see also Productivity).** 961, 3738, 5487

- algae, Crapina-Jijila lake. 3708
- associations in pools. 955
- Banyuls-ser-Mer. 4486
- bioassay, copper. 9088
- biomass determination. 3711
- blooms. 3760
- blooms, fish kill, Alabama. 3574
- blooms, *Noctiluca*, Brittany coast. 7560
- blooms, Volta Basin. 7437
- carbohydrate extraction, Pacific. 3713
- cell size, phytoplankton, Pacific Ocean. 5493
- Chad. 8231, 9049
- chlorophyll analysis as measure of primary production. 8227
- chlorophyll determination, Kuroshio. 3712
- composition and dynamics, White Sea. 8229
- composition, Newfoundland. 6599
- concentration, settle-freeze method. 2353
- culture. 6703
- Cyanophyceae. 4487
- destruction in cooling water of electric station. 5487
- determination of chlorophyll, protein and nucleic acids. 5502
- diatom bloom, Black Sea. 4485
- Diatomaceae, West Indian Ocean. 5654
- distribution, Elizabeth River, Va. 958
- distribution, Indian Ocean. 5490
- distribution, Ligurian Sea. 5489
- distribution, Red Sea, Gulf of Aden. 5492
- Durme at Hamme. 7436
- ecology, Mlungusi Dam. 4587
- ecology, Pacific Southern Ocean. 8224
- ecology, permanent lakes, Tchad. 8231

effect of effluent from sulphite cellulose factory, Finland. 6652

effect of glycerol. 8222

effect of NTA, estuaries. 9089

effect of physical chemical conditions on distribution. 474

effects of pressure and temperature on metabolism. 9046

effect of thermal pollution, Ivankov reservoir. 4488

estimation without pigment extraction. 5498

fluctuations, Untersee, Obsee. 5496

German Lakes. 1809

Germany. 7425

growth. 3710

growth near marine sewage outfall. 6685

Gymnodinium breve, fish disease cause. 3288

horizontal distribution, Gulf of Mexico. 5495

inhibition by copper. 4484

Kragewiel, Belgium. 3740

Lake Balaton. 7428

Lake George, Uganda. 3725

Lake Långsjön. 9059

Lake Tiberias. 3060

light adaptation. 1652

Ligurian Sea. 7426

maritime basin, Ostend. 493

mathematical description of growth rates. 8221

measurement of primary production. 8225

methods used to obtain bacteria-free cultures. 478

microsampler. 6602

nitrate reductase. 1660

Noctiluca scintillans bloom, St. Lucia. 7561

North Carolina coast. 3062

northwest Atlantic. 1656, 1658

nutrient enrichment experiments. 479

nutrient limitation of summer growth. 1653

optimal extraction conditions of chlorophylls from phytoplankton cultures. 477

outburst, Sweden. 6600

Pacific Ocean, Equator. 1654

phosphorus excretion. 5504

pigments of marine spp. 957

population dynamics, Aral Sea. 4490

population dynamics, Gulf of Aden. 5491

population dynamics, Kansas. 8220

population estimates, methods. 5499

population estimates, North Sea. 5488

primary productivity. 8226

primary productivity, Kuroshio. 5501

primary productivity, Lake Vyalozero. 6610

primary productivity, south-west India. 3721

primary productivity, synthesis rates of organic cell components. 9057

primary productivity, White Sea basin. 6609

primary productivity, world oceans. 6608

productivity, effect of lake renewal. 2364

productivity, interaction with *Ceratophyllum demersum*. 1674

productivity, Marion Lake. 4502

red tides, Caribbean Sea. 3849

red water, St. Lucia. 7561

relation between biomass and N_2 content. 475

relation to marine habitat, Straits of Florida. 5755

relationship with bacteria, Belorussian lakes. 6622

River Thames. 3059

role in phosphorus and nitrogen cycle, Gulf of Marseilles. 4534

role of chlorophyllase. 8223

Romanian coast. 2351

Phytoplankton, contd.,

- seasonal fluctuations in a Delhi lake. 956
- seasonal variations, Caspian Sea. 6598
- seasonal variations, North Atlantic. 9048
- Secul Dam lake, Romania. 2350
- Spitsbergen. 5497
- spring outburst, Sweden. 6600
- standing crop, North Sea. 5483
- synchrony in growth. 5500
- Tamar Estuary. 3743
- temporary ponds, alkaline, Chad. 9049
- toxicity of marine pollutants. 7464
- trace elements. 6638
- Trichodesmium bloom, Laccadives. 7492
- use of isotopes for measuring primary production. 8228
- Volta Lake. 3061
- winter-spring study of populations of 2 New York ponds. 473

Phytosociology,

- California. 7595
- Cystoseira mediterranea. 3837
- Scirpus spp in Upper-Rhine area. 3869
- Sphagnum in Scandinavia. 3870

Pianella, taxonomy. 4673

Pichia. 5798

Pigment,

- algae, chromatography. 6730
- and salinity in Porphyridium. 1084
- Apus concrifomis. 6935
- bile, metabolism in Aplysia. 1978
- blood, Myoxocephalus. 3666
- carotenoid, Actinia equina. 3914
- carotenoid, Allopura californica. 7666
- carotenoid, Aurelia aurita. 5861
- carotenoid, Betaeus harfordi. 3384
- carotenoid, Centrarchidae. 8983
- carotenoid, Chlorophyceae. 4634
- carotenoid composition, Actinia equina, North Sea and Adriatic. 6890
- carotenoid conversion, Amphidinium klebsii. 4731
- carotenoid, Decapoda. 7752
- carotenoid metabolism, Artemia salina. 1877
- carotenoid metabolism, Pinnotheres pisum. 3377
- carotenoid, Mytilus edulis, M. californianus. 2013
- carotenoid, occurrence and function, Hydra. 8470
- carotenoid patterns, Chlorophyceae. 5697
- carotenoid, Psolus fabrichii. 8721
- carotenoid, seasonal cycles, Mytilus. 3470
- carotenoid, Xanthophyceae. 4700
- carotenoid, xanthophyll cycle, algae. 7488
- cell behaviour, Paratelpusa hydrodromous. 4068
- chlorophyll content, algae. 4489
- chlorophyll estimation of phytoplankton. 5499
- chlorophyll, population estimated, phytoplanktonic, North Sea. 5483
- chromatic changes, Anacystis nidulans. 3210
- chromatographic analysis, Dunaliella. 5721
- composition, adaptation to infra red in Chlorella. 1062
- composition, relation with CO₂ exchange in Anacystis nidulans. 1023
- computer simulation, Mollusca. 3454
- conversion of β -carotene into canthaxanthin, Artemia salina. 5948
- corals, blue-green alga. 115
- Cyanophyceae, Rhodophyceae. 5630
- demonstration and effect of melatonin, Oncorhynchus tshawytscha. 8885
- dietary carotenoids, Phoenicopterus ruber. 8826
- diversity in lake sediments. 5628
- effect of diet on colour change, Pimelometopon pulchrum. 2284
- effect of melanin and epinephrine on melanophores, teleosts. 2956
- gonadal, Holothuria leucospilota. 2826
- green, Patella ova. 1994
- haemoglobin, sedimentation behaviour, Amphibia. 8768
- induced mutations, Chlamydomonas reinhardtii. 5703
- integumental, Isopoda. 6959
- Isactinia olivacea. 3332
- isolation of linoxanthin from Scenedesmus and Chlorella. 574
- Jaera albifrons, polychromatism. 3400
- marine plankton. 957, 2354
- melanin-dispersing effect, Fundulus. 3689
- melanogenesis in Rana pipiens. 4233
- melanogenesis, Uca pugnax. 6054
- melanophore change sensitivity, Oryzias latipes. 6572
- melatonin, pencil fish. 3049
- mercury-induced circular dichroism. 4608
- microspectrophotometric analysis, Chlorella pyrenoidosa. 5710
- myeloid bodies and phagosomes, frog. 2865
- photosensitive, dichroism in Orconectes. 1266
- photosynthetic, carotenoid, algae. 4589
- photosynthetic, Chlorella ellipsoidea. 7513
- photosynthetic, chlorophyll a, Anabaena variabilis. 8300
- photosynthetic, chlorophyll analysis as primary production measure. 8227
- photosynthetic, chlorophyll, Chlamydomonas stellata. 8331
- photosynthetic, chlorophyllase, phytoplankton. 8223
- photosynthetic, cytochrome f, Porphyridium, Porphyra. 8387
- photosynthetic, Euglena gracilis. 7553
- photosynthetic, haemocyanin, Pila leopoldvillensis. 8665
- photosynthetic, identification. 4589
- photosynthetic, Skeletonema costatum. 4630
- photosynthetic, Spirulina, Lake Chad. 3208
- phycoerythrin, pH-dependent association, Porphyridium cruentum. 7542
- phycoerythrin, Porphyridium cruentum. 4721
- phytochrome, dichroism, Mougeotia. 7521
- pigment cells, melanophore responses. 4403
- polymorphism, blood serum variations, Rana pipiens. 8775
- Protosiphon botryoides. 4680
- ratios, pond. 3058
- raw and cooked Oncorhynchus spp. 853
- recessive factor, Pleurodeles waltlii. 5094
- respiratory, Apistonema. 3805
- respiratory, chlorophyll, Kuroshio area. 3712
- respiratory, chromatographic analysis, haemocyanin, Decapoda. 7737
- respiratory, chromatography of haemoglobins, Anguilla spp. 8198
- respiratory, cytochrome c, Cyprinus carpio. 5334
- respiratory, cytochrome c, ovocyte, Artemia salina. 4883
- respiratory, effect of ligands on methaemoglobin, Lampetra fluviatilis. 7253
- respiratory, ferrimyoglobin, Delphinus delphis. 8831

Pigment, contd.,

- respiratory, haemocyanin, chromatography, *Todarodes pacificus*, 8698
 - respiratory, haemocyanin, *Limulus polyphemus*, 6094
 - respiratory, haemocyanin, *Sepia officinalis*, 7103
 - respiratory, haemoglobin, Amphibia, 8783
 - respiratory, haemoglobin, *Anguilla vulgaris*, 6548
 - respiratory, haemoglobin, *Arenicola marina*, 8526
 - respiratory, haemoglobin changes during metamorphosis, *Triturus viridescens*, 8787
 - respiratory, haemoglobin, coelomic cells, *Glycera dibranchiata*, 8527
 - respiratory, haemoglobin, *Cucumaria*, *Molpadia*, 8711
 - respiratory, haemoglobin, *Cyzicus hierosolymitanus*, 6012
 - respiratory, haemoglobin-free, *Chaenocephalus aceratus*, 7352
 - respiratory, haemoglobin, freshwater fish, 6441
 - respiratory, haemoglobin, hybrids, Salmonidae, 8922
 - respiratory, haemoglobin, Pisces, 5339
 - respiratory, haemoglobin polymorphism, *Triturus cristatus*, 8782
 - respiratory, haemoglobin, *Rana catesbeiana*, 6261
 - respiratory, haemoglobin, root-shift, *Anguilla anguilla*, 9025
 - respiratory, haemoglobin synthesis, *Xenopus laevis*, 3526
 - respiratory, methaemoglobin, *Lampetra*, 5198
 - respiratory, metmyoglobin, hydrogen-deuterium exchange, sperm whale, 8837
 - respiratory, myoglobin, amino acid composition, 6313
 - respiratory, myoglobin hydrolysis, *Delphinus delphis*, 7216
 - respiratory, myoglobin, modification of tryptophan and tyrosine, dolphin, 6312
 - respiratory, porphyrins, *Pennatula*, *Balticina*, 5876
 - retinal screening pigment migration, frog, 2877
 - reversible denaturation of C-phycocyanin, algae, 8306
 - Rhithropanopeus harrisi*, Gdansk, 8603
 - spectrofluorometry, *Rhodopseudomonas palustris*, 4760
 - tapetal pigment response, elasmobranchs, 2947
 - visual, chimaeroid fish, 2945
 - visual, *Libinia emarginata*, 4940
 - visual, *Lota lota*, 3020
 - visual, *Rana* retina, 308
 - visual, rhodopsin content of photoreceptor, *Rana catesbeiana*, 4225
 - visual, salmon, thyroid effects, 2991
 - visual, vitamin A, *Cololabis*, 8202
 - water-soluble, *Lenormandia prolifera*, 64
 - yellow, pearls, *Pinctada*, 3475
- ## Pigmentation,
- Apus cancriformis*, 6935
 - chromogranular polychromatism of *Jaera albifrons*, 1253
 - complexity of fluorescence in *Chlorella*, 555
 - effect of UV-light on *Chlorobium*, 4756
 - Jaera albifrons*, 1917, 7776
 - Navicula ostrearia*, 541
 - variations, *Rana pipiens*, 3512
- ## *Pila globosa*,
- fallout radioactivity content, 261
 - spontaneous electrical and acetylcholinesterase activity during aestivation, 235
- Pila leopoldvillensis*, haemocyanin, 8665
 - Pilargidae*, key to Scottish genera, 3959
 - Pilayella*, orthography, 58
 - Pilicaspongia sterea* gen. et sp. n., Upper Devonian, Alberta, 5856
 - Pilidium* larvae, Swedish West coast, 2600
 - Pilumnopeus*, 8562
 - Pilumnus hirtellus*, 7472
 - Pimelodus maculatus*,
 - histochemistry of alimentary tract, polysaccharides, 8965
 - histochemistry of digestive tract proteins, 8966
 - Pimelometopon pulchrum*, effect of diet on colour change, 2284
 - Pimephales*, 3642
 - viral susceptibility, 3648
 - Pimephales promelas*, 7339
 - bioassay, linear alkylate sulphonate, 6476
 - DDT and endrin bioassays, 7448
 - squamation chronology, 5343
 - vulnerability to yellow grub infection, 7339
 - Pinctada*,
 - effects of nitrate in culture water on growth, 3473
 - effects of numbers on growth, 3474
 - studies on occurrence of yellow colour in pearls, 3475
 - Pinctada fucata*,
 - parasite, *Bucephalus varicus*, 3476
 - pest control, 3477
 - Pinctada maxima*, artificial rearing experiments, 4159
 - Pinctada radiata*, ultrastructure of ingestion of thoroplast by amoebocytes, 2023
 - Pineal organ*,
 - photoperiod and reproductive cycles in *Carassius auratus*, 5324
 - ultrastructure, *Carassius auratus*, 5321
 - Pinnipedia*,
 - behaviour in captivity, 7225
 - British Columbia, 3549
 - population estimates, California, 7223
 - Pinnixa faba*, symbiotic with *Tresus capax*, Pleistocene, 201
 - Pinnotheres leleouffi* sp. n., West Africa, 2661
 - Pinnotheres pisum*,
 - carotenoid metabolism, 3377
 - in *Mytilus*, 202
 - Pinnotheres placunae*, larvae, 4923
 - Pinnularia biceps*, 6742
 - Pinnularia gibba* var. *sphagnicola*, 7494
 - Pinocytosis*,
 - Amoeba*, 90
 - Chaos, 90
 - Piona alpicola*, life history, 8639
 - Pisaster ochraceus*, induction of oocyte shedding and meiotic maturation, 7921
 - Pisaster-Tegula*, interaction, prey patches food preference intertidal community, 4133
 - Pisces*, 5550
 - actomyosin ATPase activation by lecithin, 8851
 - Afghanistan, 8861
 - bibliography, 8069
 - blood culture method for chromosomes, 8852
 - blood pressure regulation, 7239
 - blood supply to heart, 8854
 - brain, 5165
 - California partyboat fishery, 7244
 - change in size of jaw apparatus in relation to age, 8853

Places, contd.,

- chemical composition of fatty acids. 8085
- Chilka Lake. 6371
- chromatographic analysis of eye proteins. 8879
- chromatographic analysis of pituitary extracts. 6478
- chromatographic analysis, PCP. 6658
- continental migration. 5402
- ctenoid apparatus, streamlining. 7268
- deep-sea, karyological study. 5227
- determination of silver in tissues. 6648
- distribution, English Waters. 5164
- distribution, Laccadives. 4303
- distribution, Scotland. 5163
- ecology, Japan. 8039
- ecology, Venezuelan plains. 6374
- ecology, Washington. 8038
- effect of amines and nicotine on blood pressure. 7238
- effect of high water level, Lake Victoria. 5532
- effect of sewage pollution, Maryland. 6653
- electrophoretic method of taxonomy. 6325, 6326
- factors affecting migration. 5162
- feeds, Pacific Ocean. 7232
- fish zones, Czechoslovakia water courses. 3553
- fishing gear. 6332
- fluctuation in erythrocyte number. 8082
- fluctuations of leucocyte number. 8081
- genome sizes. 8040
- Gulf of Guinea. 3021
- habitat and homing instinct. 7266
- habitat improvement, Kirovograd region, USSR. 8866
- haemoglobin. 5339
- host-parasite relationship, Nematoda. 7700
- induction of anaesthesia. 6323
- insecticide bioassays. 7449
- iron salt in Ichthyopathology. 8943
- Kansas. 8080
- Lake Erie. 7233
- larvae, mouth size. 7265
- larvae, Norway coast. 3014
- larvae, zooplankton, Caribbean Sea. 6605
- leucocytes. 7319
- local movements. 5226
- mercury pollution. 6650
- mesopelagic, distribution, western North Atlantic. 6319
- mortality due to red water, St. Lucia. 7561
- multiple haemoglobins, chromatographic analysis. 6441
- muscle contents, trimethylamine oxide. 8849
- nicotine as toxicant. 6331
- North Pacific. 8855
- oxidative metabolism of rotenone. 8936
- oxygen consumption by haemoglobin-less fish. 8166
- oxygen levels in blood. 8890
- parasitism by Trichodinidae spp. 8440
- physiology. 7237
- physiology etc., electric organs. 8848
- predators on Crustacea, California. 8041
- pumping for fish. 6335
- Rangiroa. 7663
- reflecting surfaces. 7236
- resorption of sexual products. 8889
- respiration. 3554
- rubber bands. 5597
- seasonal distribution, Louisiana. 6375
- serum and haemolymph proteins. 8945
- sorbitol dehydrogenase isozymes. 8145
- sperm stains. 5167
- taxonomy. 5161
- temperature effects. 8037
- TMAO decomposition in muscles. 8850
- toxicity of marine pollutants. 7464
- type species. 7235
- type specimens, Tulane University. 6320
- vertical distribution, Lake Kizaki, Lake Nakatsuna. 7234
- vortex formation and character of border layer. 7267
- Piscicola salmositica*. 4871
- mortality, *Oncorhynchus tshawytscha*. 5281
- Piselinotecidae*. 7843
- Piselinotectus* spp. n., Tanzania. 7843
- Pisidia*. 6978
- distribution, USSR. 7892
- Pisidia inaequalis*. 4022
- Pisidium*. 5029, 5306
- river Rhine, Meuse, Scheldt. 5029
- Pisidium crassum*, *Sphaerium succicum*, energy flow, White Sea. 4162
- Pisitoe bispinosa*, proposed suppression of *bispinosa*. 194
- Pisoides edwardsi*, larval development in the laboratory. 1270
- Pistia stratiotes*. 7314
- population control, Nigeria. 6827
- Pistol, patented underwater sealing pistol. 511
- Pit connections, dimorphic, in *Pseudogloioiphloea*. 1093
- formation in *Pseudogloioiphloea*. 1800
- Pitar. 7877
- Pithecopus pailonus*, rediscovery in Argentina. 303
- Pithophora*. 5523
- Pithophora oedogonia*, amitotic nuclear division. 570
- cytology. 569
- Pituitary, activation by bacterial toxins, *Salmo*. 2982
- adenohypophysis ultrastructure, *Oncorhynchus nerka*. 5276
- chromatographic analysis of extracts, *Pisces*. 6478
- effect of gonadectomy, *Oncorhynchus*. 371
- extracts, chromatography, *Raia rhina*. 6367
- hypothalamo-hypophyseal system of *P. phoxinus* effects of hypophysectomy. 418
- judging completeness of hypophysectomy in goldfish. 397
- localization of ACTH and prolactin in migratory *Oncorhynchus*. 839
- reserpine effects, *Clarias batrachus*. 5329
- specialized basophilic cells, *Mustelus canis*. 355
- Pituophis melanoleucus*, renal function. 3534
- Placiphorella*. 6162
- Placobdella*, host in development of *Trypanosoma*. 1151
- taxonomy. 6923
- Placobdella parasitica*. 4871
- Placopecten magellanicus*, acid-soluble nucleotides in abductor muscle. 4160
- borers in shell. 2803
- symbiotic zoochlorellae. 4729
- Plaesiomys*. 7130
- Plagiotoma*. 7623
- Plagusia bilineata*. 7342
- Plaice*, American, eggs and larvae. 2322
- population dynamics, Loch Ewe. 4469

Planaria, 3875, 8485

- ecology, Japan. 4849
- ecology, southern Europe. 6905
- freshwater, ecology in Tsugaru Peninsula. 1859
- gametogenesis and fertilization. 8486
- monoamine-containing neurons. 3337
- pharynx regeneration. 4852
- physiological gradients. 1184

Planaria torva. 6906

Plankton, (see also Phytoplankton and Zooplankton)

6017, 7115, 7671

- Aegean Sea. 5550
- agar mounting. 3064
- association of periphyton. 4583
- bacteria, Rhode Island. 5770
- bacterioplankton as food source, Black Sea. 6595
- bacterioplankton, Danube. 6592
- bibliography of calcareous nannoplankton. 7424
- bioassay, Corexit 7664. 8252
- bioluminescence. 2349
- biosynthesis. 4749
- bucket for filtration. 3055
- Cap Blanc. 2360
- Chaetoceros simplex. 5666
- chemical analysis, Japan. 6594
- chronostratigraphy. 1667
- ciliates of a eutrophic pond. 2567
- collecting nets. 3718
- conical nets. 3054
- copepods in Georgian Bay. 2633
- culture apparatus. 5877
- data study. 5479
- decapod larvae, Kamchatka shelf. 4906
- development and distribution, northern White Nile. 952
- distribution in Japanese waters. 472
- distribution, Schlei. 5508
- distribution, Stomatopod larvae, North Sea. 6050
- dominance of Ergasilus lucioperca males in Newfoundland collections. 1216
- effects of waste water discharge, California. 9090
- eggs and larvae, May and June, Skagerak. 4304
- evolution. 7427
- Flagellata, Germany. 6597
- freshwater environment, Surinam. 5529
- Germany. 7425
- Gotland Deep. 9044
- grouping samples by numerical analysis. 951
- high speed samplers. 9045
- Indian Ocean. 5563
- Infusoria, Sevastopol Bay. 4494
- isopod distribution, North Sea. 6028
- Lake Baikal. 6931
- Lake Maggiore. 3057
- Lake Michigan. 3768
- Lake Quarum. 4519
- Lake Volta. 4514
- macroplankton, seasonal variations, Banyuls-sur-Mer. 4497
- mathematical models, aquatic system. 4506
- meroplankton, Oslo fjord. 9050
- mesoplankton, distribution and composition, Southern Ocean. 4495
- microplankton, rivers Morlaix and La Penze. 953
- morphology and ecology of Foraminifera. 5838
- nannoplankton. 8218
- nannoplankton, Otway Basin. 7423
- net. 5484
- neuston, Norway. 2370

northeast Atlantic. 9043

- nutrient distribution, Panama, Colombia. 6593
- Obretin Lake. 2346
- ocean metabolisms. 4480
- Ostend. 950
- parasitism of desmids by fungi. 8327
- photometric technique for bioluminescence. 5480
- pigments. 2354
- productivity, effective phosphates and micro-nutrients. 2384
- Protozoa, Lake Tiberias. 2570
- Rotifera. 6915
- sampler. 8219
- sampler efficiency. 3707
- sampling. 7671
- sandspit ponds, Presque Isle. 4513
- seasonal changes, pigment ratio. 3058
- seasonal fluctuations, Lake Pääjärvi. 5485
- seasonal variation and fatty acids, Copepoda. 6939
- seasonal variation in hydrography and nutrient chemistry, Bermuda. 471
- seasonal variation, Kiel Bay. 5486
- seasonal variation, Strait of Georgia. 4752
- Skeletonema costatum, variation in photosynthetic properties. 4630
- succession, Japan. 7434
- surf, Amphipoda. 2641
- survey, Irminger Sea. 5481
- Thysanoessa longicaudata, North Atlantic. 7430
- toxicity of heptachlor. 9078
- tropical oceans. 5512
- variabilities. 9042
- vertical sampling device. 1009
- Virginia reservoir. 954
- volume gauge. 2355
- western Pacific. 3056
- winter standing biomass, Louisiana. 6596
- Planktoniella sol, ultrastructure of shell. 5680
- Planodasyidae fam. n., (Gastotricha), India. 6913
- Planodasy marginalis gen. et sp. n., India. 6913
- Planophila terrestris sp. n., Tennessee. 571
- Planorbidae, ecology, southern United States. 3440
- Planorbis corneus, 8646
 - calcium ions as inward current carriers, neurones. 7051
- Plantanista gangetica, swimming behaviour. 8832
- Plants, 6717
 - effect on ultrastructure of Elodea chloroplasts. 5811
 - propylene phenoxetol, benthos sorting. 5821
 - reticuloendothelial system stimulant, production from Chlorophyta. 5706
 - vegetation, California. 7595
- Plasmodesmata, ultrastructure, Bulbochaete hiloensis. 31
- Plastics, artificial seaweed. 4594
- Platichthys. 6580
- Platichthys flesus,
 - accumulation of DDT. 8212
 - catch statistics, Baltic Sea. 5461
 - K-Na exchange mechanism. 940
 - radiation-induced gynogenesis and androgenesis. 815
- Platycephalus isacanthus. 8154
- Platycheilichthys planissimum sp. n., distribution, Congo Coast. 4075
- Platydorina caudata,
 - nutrition. 4679
- Platydorina cruenta. 6117

- Platyhelminthes*, 8241
 from freshwater fish, Sudan, 124
 life histories, *Gammarus lacustris*, 8579
 zoogeography, *Acipenseridae*, 5428
- Platymonas convolutae*, symbiosis with *Convoluta*, 2518
- Platymonas cordiformis*, 6597
- Platymonas suecica*, 5959
- Platynereis*, 3969
- Platynereis dumerilii*, swarming, Arcachon Bay, 7709
- Platyopocillus maculatus*, XY females, X-irradiation, 1633
- Platyopocillus x Xiphophorus*, growth and amino acids, 3051
- Platyrhinidae*, 8069
- Platyrhinoidis triseriata*, intrinsic cardiac rate regulation, 8881
- Platystrophia*, 7130
- Plea*, 7003
- Plecoglossus altivelis*, 8081, 8082
 leucocyte numbers, 818
 pineal organ, 3616
 predation by *Opsariichthys uncirostris*, Lake Biwa, 7340
 relation between cortical alveoli and yolk-nucleus, 5288
- Plecoptera*, 4515, 5529
 headwater stream, 709
 Hungary, 2725
 Kaltisjokk stream, 710
 Lapland, 4980
 Lincolnshire, UK, 2724
- Plectolaimus magdalenae* sp. n. (*Leptolaimidae*), Colombia, 7689
- Plectonema boryanum*,
 developing polyphosphate bodies, 531
 nitrogenase activity, 8307
- Plectorhynchus*, 5172, 5173
- Plectrocnemia geniculata*, larva, 3946
- Plectus*, 4861
- Pleistocene*, pinnotherid crabs symbiotic with pelecypods, 201
- Plesionika ensis*, distribution and ecology, Arabian Sea, 7801
- Plethodon cinereus*, temperature-photoperiod effects on spermatogenesis, 767
- Pleurehdiera haraldi* gen. et sp. n., 8642
- Pleurethyrops secunda*, 7743
- Pleurobema*, 7060
- Pleurobrachia*, culture apparatus, 5877
- Pleurobrachia pileus*, 5877, 8252
- Pleurobranchomorpha*, eastern Australia, 2769
- Pleurobranchus*, 3452
- Pleurocera acuta*, population dynamics, Kentucky, 5011
- Pleurochrysis scherffellii*,
 cellulosic wall component produced by Golgi apparatus, 1036, 1768
 culture, 2498
 relationship of Golgi apparatus to wall formation, 1039
 ultrastructure, 5681
- Pleurodeles*, interspecific nuclear graft, 8756
- Pleurodeles waltlii*, 5615, 7150, 8735
 nucleic acid synthesis during gastrulation, 8758
 origin of enamel of teeth, 8757
 pigmentation recessive factor, 5094
 RNA polymerase activity during development and normal and hybrid embryos, 8735
- Pleurodema*, morphology, 6234
- Pleurodites*, reviewed, 217
- Pleuroncodes*, proximate and lipid analysis, 5514
- Pleuroncodes planipes*, 9011
- Pleuronectes*,
 GABA in erythrocytes, 6580
 North Sea, 8973
 reaction to tagging, 9017
 reaction to transplantation and tagging, 6579
 strontium and calcium, Sea of Okhotsk, 4305
 transplantation, 9017
- Pleuronectes platessa*, 7466, 8192
 amino acid requirements, 3043
 colour change, 5224
 development and morphology of Kupffer's vesicle, 6581, 7413
 fish farming, UK, 6691
 food conversion, 3044
 growth of 0-group, artificial feeds, 6582
 host to *Gyrodactylus unicapula*, 1860
 radiation-induced gynogenesis and androgenesis, 815
 reaction to water currents, 1632
 temperature effects on dehydrogenase, 5466
 thyroid, iodine, 2344
 visual thresholds and spectral sensitivity, 946
- Pleuronectidae*, 4387
- Pleuronectiformes*,
 food and feeding habits of juveniles, 465
 food conversion factors and length/weight relationship, 941
 jaws, adaptation, 1630
 lactate dehydrogenase isozymes, 466, 1631
- Pleurosigma*, 5651
- Pleurosigma kowiense* sp. n., 5656
- Pleurosigma signatum* sp. n., 7495
- Pleurotaenium trabecula*, formation of gypsum crystals in relation to Ca ion concentration, 1037
- Pleuroxus denticulatus*, life cycle, 2627
- Pleustes platypa*, mimicking *Mitrella carinata*, 2655
- Plicobothrium globicephalae* gen. et sp. n., in *Globicephala melaena*, 1180
- Plinthaster*, 6177
- Plotocnide*, Arctic Ocean, 4832
- Plumatella marcusi*, 5056
- Plumatella marlieri*, 5056
- Pneumatophorus japonicus*, 6526
- Pocillopora*, 3933
- Pocillopora damicornis*, 7676
- Podocerus laevis*, Gulf of Mannar and Palk Bay, 4028
- Podochytrium cornutum*, British Isles, 4771
- Podocnemis*,
 karyology, Brazil, 6297
 karyology, cultured cells, 6299
- Podocoryne*, growth control in young colonies, 641
- Podocoryne carnea*,
 cell movements in differentiating hydranths, 640
 gametogenesis, 3934
- Podocotyle atomon*, 5382, 6549
 from *Gasterosteus aculeatus*, 1181
- Podocysts*, in *Aurelia aurita*, 2580
- Podon polyphemoides*, temperature preference, 7815
- Podophthalmus*, 4911
- Podostemaceae*, seed adhesion, 4781
- Poecilia*,
 activity of pituitary cells during gestation cycle, 9041
 chromosome constitution, 4472
- Poecilia latipinna*, 4477
 acid phosphatase in prolactin cell, 2327
- Poecilia reticulata*, (see also *Lebistes reticulatus*),
 effect of Methallibure on spermatogenesis, 2328
 effect of methallibure on testes and secondary

- Poecilia reticulata**, contd.,
 sex characters. 8213
 effect of methyl testosterone on ovary. 5467
 effect of salmon gonadotrophin on ovary and sexual behaviour. 467
 feeding. 2329
 flagellated spermatogonia and spermatocytes. 1645
 hypophysectomized, testosterone effect. 1635
 hypophysectomy effects. 1634
 method for obtained precisely timed inseminations. 943
 physiology of ovary. 5468
 regeneration of anal fin. 6583
 response of ovary to pituitary extracts. 1647
 spermatogenesis. 1643, 1646
 spermatozoa. 1644
 temperature preferences. 7414
 ultrastructure, pericardial sac. 3697
- Poecilia sphenops**, 7389
 chronology of spermatogenesis and spermiogenesis. 942
- Poeciliidae**,
 amino acids as stimulating agents of DNA replication in melanomas. 469
 tumour growth. 3050
 tumour-inducing gene constellations. 3052
- Poeciliopsis**, hybridization, unisexuality and polyploidy. 2330
- Pogonoperca punctata**, toxin in skin. 5406
- Pogonophora**,
 phylogeny. 7136
 present distribution, Pacific Ocean. 4172
 regionation and terminology. 758
- Poiretia**, 7019
- Poisons**, 5781
 Aluterin, *Polythoa tuberculosa*. 3684
 Chironex fleckeri toxins. 8467, 8468
 Ciguatoxin from *Gymnothorax*, Johnston Islands. 9033
 distribution, seasonal variation, Holothuria leucospilota. 8719
 extraction of toxins from roe, *Stichaeus grigorjewi*. 9003
 ichthyotoxins, Chrysomonadina. 3220
 lipostichaerin, *Blennius* sp. 8982
 Pahutoxin, *Ostracion lentiginosus*. 8211
 shellfish, caused by *Gonyaulax catenella*. 6131
 skin gland secretion, *Salamandra maculosa*. 6267
 Spheroides maculatus toxin, antidote. 5477
 toxin, *Prymnesium*. 3222
 toxin 8856
 toxin in skin, *Pogonoperca punctata*. 5406
 toxin of Tetraodontidae. 9016
 toxin produced by *Gonioemus vertens*. 5869
 toxin secretion, *Oxynocheilus panamensis*. 8663
 transfer in food chains. 8330
 turtles. 3538
- Poland**,
 aquaculture. 3640
Cobitis (Sabanejewia) aurata from River Pilica. 403
 growth of *Esox lucius* in rivers. 831
Haementeria costata, from Southern Olsztyn. 139
 migration of *Lucioperca lucioperca* in the Odra Estuary. 435
 new records: *Psammoryctes albicola*, *Branchiobdella italica*. 1196
 new stations for *Bufo calamita* in Stubice District. 297
 River Supraśl, *Diamesa campestris*. 1952
Salmo trutta of Pomeranian coastal rivers. 388
- Polar environment,
 distribution of sperm whales. 7231
 ecology. 7619
 invertebrate reproduction. 9073
- Polarization**,
 mercurial-induced circular dichroism, pigments. 4608
 natural loops of newt lampbrush chromosomes. 5128
- Polemaetus bellicosus**. 7692
- Polinices lewisi**, histology of accessory boring organ. 236
- Polistotrema stouti**, osmoregulation. 8068
- Poljanskina**. 6866
- Pollachius**, 5221
 intestinal parasites. 5382
- Pollachius pollachius**. 5382
- Pollachius virens**, 5382
 aging. 5381
 population estimates, North Sea. 5380, 5383
 tagging experiments, Norway waters. 5379
- Pollen**, dispersion, Lake Tahoe. 6613
- Pollicipes**. 4900
- Pollicipes polymerus**. 7028
- Pollution**,
 activated sludge, mixing. 3146
 activated sludge, O₂ concentration. 3147
 Adriatic Sea. 9093, 9094
 Alaska. 2412
 algal tolerance. 3129
 analysis of PCP, in water and fish. 6658
 and bacterial infection, *Salmo* and *Catostomus*. 2408
 animal wastes. 2421
 aromatic hydrocarbons, hygiene. 8251
 bacteria, presence-absence detection. 3138
 bacteria, River Tyne. 6682
 bactericides. 3773
 bacteriology of activated sludge. 3145
 Baltic Coast. 3159
 Barra des Jangadas, Brazil. 2435
 Bellingham Harbour, effect on *Oncorhynchus*. 7458
 benthos. 6684
 BHC degradation. 3157
 biodegradability of industrial wastes. 4548
 BOD, activated sludge plant. 3761
 British Isles coast. 7466
 carcinogenic hydrocarbons, Clipperton lagoon. 5789
 Caspian Sea. 9100
 chemical, 3774, 5945, 6019, 6677, 6678
 chemical, bioassays and insecticides, Pisces. 7449
 chemical, Canada. 9096
 chemical, Caspian Sea. 9100
 chemical, Castle Lake. 7294
 chemical degradation of 1-naphthol in sea water. 7876
 chemical, effect on fresh-water fisheries. 3593
 chemical, effect on Tubificidae. 9076
 chemical, estuaries. 9065
 chemical, Grand River Ontario. 5565
 chemical, hygiene, North Sardinia. 9095
 chemical, impoundments. 7007
 chemical, Klamath River Oregon. 9079
 chemical, Lake Michigan. 3768
 chemical, Meurthe River. 5566
 chemical, power stations, prevention of fouling. 9101
 chemical, research. 3770
 chemical, River Tyne. 6682
 chemical, supralittoral zone. 7788
 chemical, USA. 7446
 chemical, Washington. 6675
 chlorine. 3874

Pollution, contd.,

- chlortetracycline, Pisces. 6324
- concentration of sludge. 2427
- copper, *Crassostrea virginica*. 5017
- copper, inhibition of marine phytoplankton. 4454
- copper, *Pseudopleuronectes americanus*. 4475
- Danube. 3755
- DDE, California. 3545
- DDT. 7016
- DDT effect on tadpoles, *Rana temporaria*. 7455
- DDT, Monterey Bay. 7463
- deep lakes. 2431
- deoxygenating. 3751, 3774, 5572, 5576, 6680, 7007
- deoxygenating, activated sludge equipment. 3771
- deoxygenating, activated sludge treatment. 5573
- deoxygenating, algal flocculation. 9077
- deoxygenating, bacterial treatment of sewage. 8410, 8411
- deoxygenating, concentration of biological solids in sewage. 5577
- deoxygenating, control by biological purification of sewage. 9110-9114, 9116-9119, 9121, 9125, 9128
- deoxygenating, Danube. 3752
- deoxygenating, disinfection of sewage by heating. 9108
- deoxygenating, effects, California. 9091
- deoxygenating, effects on fauna and fish migrations. 6653
- deoxygenating, effects on fauna, Florida. 6674
- deoxygenating, effects on marine environment, California. 9090
- deoxygenating, effects on phytoplankton, Susquehanna River, New York. 9047
- deoxygenating, estimation of organic carbon in waste matters. 6655
- deoxygenating, faecal coliform regrowth. 3766
- deoxygenating, isolation of ether-resistant enteroviruses from sewage. 5794
- deoxygenating, Lake Michigan. 3768
- deoxygenating, Lake Pfaffikon. 3750
- deoxygenating, marine environment. 3757
- deoxygenating, Marseilles. 7468
- deoxygenating, Mediterranean. 6679
- deoxygenating, production of feeds. 9109
- deoxygenating, *Salmonella*, contents. 9092
- deoxygenating, Seversky Donets River. 9084
- deoxygenating, sewage, microflora content. 3778
- deoxygenating, sewage, treatment. 6659-6663, 6665-6671
- deoxygenating, sludge activity measurement. 3763
- deoxygenating, stabilization. 3765
- deoxygenating, *Streptococcus*. 5567
- deoxygenating, sulphur bacteria in sewage treatment lagoon. 6805
- deoxygenating, treatment. 3756, 3769, 3772, 5569
- deoxygenating, USA. 7446
- deoxygenating, viral concentration. 3754
- deoxygenating, water treatment. 3769
- detergents, *Littorina*. 5589
- detergents, *Scolecipis fuliginosa*. 4557
- diatoms as indicators. 4545
- dichlorophene. 6664
- drinking water, iron bacteria in ground water supply. 69
- drinking water, microorganisms in water works, Delhi. 68
- drinking water standards, Canada. 9052
- effect of ammonia nitrogen on growth of *Ulva*. 576
- effect of chemical wastes on littoral fauna, Natal. 8255
- effect of NTA on estuarine phytoplankton. 9089
- effect of pesticides on estuarine organisms. 9067
- effect on aquatic flora, sulphite cellulose factory Finland. 6652
- effect on benthos, Oresund. 1696
- effect on fish. 8247
- effect on marine organisms. 3163
- effect on recreational lakes. 6649
- effect on water supplies. 3777
- estuarine. 5578, 9065
- estuarine and marine. 8254
- faecal streptococci, stream. 2410
- filtrable microorganisms parasitic on bacteria. 3296
- fish with rubber bands. 5597
- frequency of abnormal fishes, Georgia. 8862
- freshwater, algal plankton of a polluted pond. 980
- freshwater, bacteria of Ross Barnett Reservoir. 990
- freshwater, bacterial counts of water of Manaus, Brazil. 983
- freshwater, chlorinated hydrocarbons in young *L. Michigan* *Oncorhynchus*. 836
- freshwater, dieldrin uptake by isolated *Salmo* gills. 981
- freshwater, effect of Dylox on *Salmo* larvae. 982
- freshwater, filamentous activated sludge. 991
- freshwater, medium for enumeration of coliforms. 1111
- freshwater, O_2 balance in micro stabilization ponds. 984
- freshwater, optimum temperature for quantitation of faecal coliforms. 500
- freshwater, phosphate removal by lime-biological treatment. 989
- freshwater, regulation of N levels in sewage microbes. 988
- freshwater sewage, potentiated treatment process. 994
- freshwater, specific growth rate and NH_3 -N conc in sewage microbes. 987
- freshwater, viruses from water samples. 985
- freshwater, viruses in water supplies. 986
- Genoa harbour. 6684
- glycerol, effects on phytoplankton. 8222
- gravity thickeners for sewage. 4546
- Great Barrier Reef. 9098
- hydrocarbons, oils. 6601
- hygiene hazard. 8250
- in fouling organisms. 2439
- Indian River complex. 8246
- indication by benthos, brackish water environment. 9069
- indicator. 7532
- indicator, Bryophyta. 7600
- indicator species for water quality. 5826
- indicator species, gulls. 8019
- industrial effluents, Tees Bay. 3158
- influencing distribution of algae, River Moosi, India. 516
- inhibition of fouling organisms, piping. 6707
- inland fisheries. 3776
- insecticide, effect on *Cancer magister*. 4033
- insecticides. 3764
- irrigation with waste treatment effluents. 1115
- isotopes, *Salmo*. 6693
- lead. 3748
- lead, square-wave polarographic determination rivers. 8244
- Long Island, New York. 2438
- Los Angeles Harbour. 4556

Pollution, contd.,

- Lumbricillus rivalis* and *Enchytraeus coronatus* in percolating filter. 653
- marine. 5593, 7788
- marine, effect of detergents on *Nucella lapillus*. 1005
- marine, effect of oil on salt-marsh communities. 1004
- marine environment. 8253
- marine, kraft mill effluent. 1003
- marine, lobster larvae unaffected by bleached kraft mill effluent. 678
- marine, MPN tests for faecal streptococci. 1002
- marine, phytol-derived C₁₉ and triolefinic hydrocarbons in zooplankton and fish. 1006
- marine, Toronto Harbour, feeding of tubificed worms. 2620
- mathematical analysis. 5587
- mercury. 7451
- mercury, Chrysophyceae accumulation. 3215
- mercury, effect on *Oryzias latipes*. 9038
- mercury in freshwater fish. 6650
- metal, enzyme effects, *Fundulus heteroclitus*. 8203
- microparticulates. 2423
- milk plants. 6656
- minerals, Romanian rivers. 2411
- molasses distillery wastes, loading parameters. 4547
- monitoring. 6676
- monitoring, lead, rivers. 8244
- non-conservative pollutants. 3132
- oil, aquatic plant effects. 7454
- oil, British Isles. 7459
- oil, control, Santa Barbara. 7469
- oil, effect on birds. 8015
- oil, effect on wildlife. 5594
- oil, Finland. 6687
- oil, Great Barrier Reef. 7465
- oil in salt marshes. 6690
- oil-in-water dispersions. 2425
- oil, Larodan for cleaning seabirds. 8816
- oil, Massachusetts. 5596
- oil, North America. 5176
- oil, removed by burning. 8259
- oil, Santa Barbara. 7460
- oil, Sargasso Sea. 5595
- oil, seabirds. 6688
- oil, seabirds, British Isles. 7461
- oil, treating oiled seabirds, British Isles. 8815
- oil, Southampton. 6686
- oil, zooplankton, Black Sea. 7473
- Ophryotrocha labronica* as indicator. 6672
- organic carbon-organic nitrogen ratios, estuary. 2434
- organic, effect of benthos, Adriatic. 7467
- organic, investigation by UV. 3135
- organochlorine residues, monitoring, British Isles. 7462
- Panama and Colombia. 6593
- PCP, metabolism of *Tapes philippinarum*. 5590, 5591
- pesticides, Monterey Bay. 7463
- photosynthetic oxygen production, polluted estuary. 2416
- pollution scale. 7470
- ponds, Hyderabad. 7439
- pulp mill effluent, Scotland. 9099
- purification of biologically-treated wastewater. 5575
- radioactive. 9083
- radioactive, *Amiurus nebulosus*, caesium. 4544
- radioactive, distribution of isotopes in Pacific salmon. 6693
- radioactive, effects on *Artemia salina*. 3982
- radioactive, effects on estuarine organisms. 9066
- radioactive, North Adriatic. 4551, 4552
- risk to health. 4553
- Romanian rivers. 2417
- Salmonella. 6683
- sewage. 6680, 6685
- sewage, along Natal coast. 504
- shellfish. 7058
- Sile river, Italy. 3140
- strontium. 6694
- survey, artificial substrates. 3136
- Swedish coast. 3160
- tannery wastes. 3758
- tensid. 5579
- tetrachloro-O-benzoquinone, toxicity. 4331
- thermal, biological effects. 7611
- thermal, California tidal waters. 5582
- thermal, Chalk Point Maryland. 5583
- thermal, effect on benthos, Cape Cod Canal. 5584
- thermal, effect on benthos, Oklahoma. 9086
- thermal, effect on growth rate of *Sphaerotilus*. 3909
- thermal, effect on phytoplankton, Ivankov reservoir. 4488
- thermal, effect on reproduction and behaviour; Salmonidae. 5280
- thermal, estuaries. 9065
- thermal, estuary, Miami. 8256
- thermal, limits. 5586
- thermal, Mississippi. 5580
- thermal, Pacific coast. 5581
- thermal, planning. 5585
- thermal, Protozoa, Potomac River. 4802
- thermal, reaction of fish around discharge from atomic plant. 4395
- thermal, stimulating marine productivity. 3076
- tin. 3749
- toxicity of metals to Chlorophyceae. 7501
- toxicity of pollutants. 7464
- treatment of effluents. 2426
- treatment of sugarbeet waste water. 2420
- USA. 7446
- use of 'kelp forest' indicators. 5588
- use of spinner culture cells for detection of. 502
- viability of Crustacea larvae in polluted waters. 7472
- virus adsorption, activated carbon. 2422
- water quality protection, Romania. 4543
- water resource exploitation. 3775
- yeasts as indicators, Lake Champlain. 5798
- yeasts as pollution index, Saskatchewan river. 5797
- Pollution control**, 3774, 5569, 5571, 5575, 5576, 8015, 9062, 9085
- activated sludge treatment. 3771, 5573
- activated sludge waste treatment. 5572
- air bubble barriers. 9097
- air diffusing unit for aerating sewage. 5574
- algae sedimentation. 7457
- algal flocculation with aluminium sulphate and polyelectrodes. 9077
- artificial aeration of sewage. 9123
- bacterial degradation of crude oil. 6689
- bactericides. 3773
- baffled biological basins. 3756
- biodegradability of combined nylon and municipal wastes. 4549
- biodegradability of industrial wastes. 4548

Pollution control, contd.,

- biodegradation of organic waste. 5793
 - biological purification of sewage. 9110-9114, 9116-9119, 9121, 9125, 9128
 - British Isles. 7466
 - Canada. 9096
 - chemical. 6677
 - concentration of biological solids in sewage. 5577
 - cooling systems. 3783
 - degradation of 1-naphthol in sea water. 7876
 - design standards for aerobic oxidation ponds. 9080
 - dichlorophene pesticide. 6664
 - dissolved oxygen measurement. 3762
 - Escherichia coli*, in shellfish. 4554
 - estuary. 8237
 - floating barrier. 8258
 - Great Barrier Reef. 7465, 9098
 - jet aeration for activated sludge. 3759
 - Lake Michigan. 3768
 - Mediterranean. 6679
 - microbiological treatment for slurries. 9115
 - microorganisms control in sewage. 7456
 - milk plant wastes. 6656
 - monitoring, Pacific Ocean. 6676
 - oil pollution, New York. 6692
 - oil slicks. 8259
 - oxygen demand, activated sludge plant. 3761
 - poly-bromide resin control of microorganisms. 5570
 - potable water supplies. 8407
 - poultry waste, bacteria. 6806
 - predator-prey relationships, model for activated process. 4550
 - research. 3770
 - Romania. 4543
 - Santa Barbara. 7469
 - Seversky Donets River. 9084
 - sewage. 9108
 - sewage, sulphur bacteria. 6805
 - sewage treatment. 5571, 6659-6663, 6665-6669, 6671, 8289, 8408, 8410, 8411
 - sludge disposal at sea. 3757
 - solution containing yeast and antibiotics. 3772
 - Southampton. 6686
 - sterilization of slurries by heat. 9124
 - tannery wastes. 3758
 - thermal pollution. 5585
 - thermal pollution, limits. 5586
 - use of bromine for treatment of water. 6713
 - virus removal. 3767
 - water clarification using sodium alginate. 8275
 - yeasts, degradation of hydrocarbons. 6695
- Polyamines,**
- amphibian. 2890
 - microbiocidal. 1746
- Polyandrocarpa oligocarpa.** 7138
- Polyandrocarpa tricta.** 7139
- Polyarthra trigla.** 6915
- Polyarthra vulgaris,** ecology, Canada. 3715
- Polycanthus fulvus sp. n.,** New Caledonia. 3330
- Polycanthus senegalensis,** distribution, Caribbean. 3330
- Polycarpa arnoldi.** 7139
- Polycarpa beuziti sp. n.,** 7938
- Polycelis auriculata.** 4849
- Polycelis felina.** 4515
- Polycelis nigra.** 3946, 6906
- Polycelis tenuis.** 3946
- Polycentropidae.** 3890

Polycentropus flavomaculatus, larvae. 3946

Polycera janjuka. 6117

Polycera risbeci. 6117

Polychaeta, 7116, 8439

benthos infauna, Chile Bay. 4528

dehydrogenases. 8521

development of larvae. 144

ecology, Mexico. 8520

ecology, Pacific. 4870

ecotopes. 6921

infralittoral zone of Provence. 3955

keys, Argentine coast. 4867

larval settling apparatus. 6696

mitotic apparatus of eggs. 7117

muscle systems used in taxonomy. 8522

Ostend. 6926

shell-boring. 2605

Polychaetes,

pollution, Los Angeles Harbour. 4556

reproduction, Biscayne Bay. 3347

Polycirrus caliendrum. 5981

Polycitor crypticus. 7138

Polycitor fungiformis. 7138

Polydora reproduction. 2616

Polydora antennata. 9050

Polydora (Boccardia)redeki, Finland. 1875

Polydora ciliata, 6926, 7089, 9050

boring in *Mercenaria mercenaria*. 2795

infecting shells of *Littorina littorea*. 2758

Polydora narica sp. n., California. 4881

Polydora websteri, boring in *Crassostrea*. 2615

Polyelectrolytes, for algal flocculation. 2500

Polygyra dorfeuilleana, shell variability, USA. 7870

Polykrikos. 3849

Polymastia. 6884

Polymorphina sp. 8447

Polymorphism,

Acmaea digitalis. 7028

Asplanchna. 1869

blood protein, *Pagophilus groenlandicus*. 335

Boltenia ovifera. 2844

colour variation, *Nymphoides indica*. 4790

Cosmarium. 3216

cyclomorphism, *Daphnia galeata*, Oregon. 7719

dimorph-ratio cline, Norway. 8024

dimorphic variants, *Uca pugnator*. 6052

genetics of *Asplanchna*. 1870

haemoglobins, *Triturus cristatus*. 8782

hermaphrodites, *Certonardoa semiregularis*. 3498

hermaphroditism, *Gerres oyena*, Pulicat Lake.

4408

left handedness, *Velella*. 4848

micronuclei in *Paramecium*. 105

multiple forms of creatine kinase, fishes. 4380

muscle proteins, *Anoplopoma*, Pacific. 3654

6-PGD, α -GPD, *Katsuwonos pelamis*. 9012

predation-balanced, of *Ceriodaphnia cornuta*. 1214

secondary sexual characters, *Nereis pelagica*.

4876

sexual dimorphism and feedback mechanisms,

Lebistes reticulatus. 6565

sexual dimorphism, *Bithynia caeruleans*, Lake

Balkhash. 7032

sexual dimorphism, *Eumicrotremus orbis*. 4407

sexual dimorphism in skin, *Salmo trutta*. 7292

sexual dimorphism, *Rana esculenta*. 4232

sexual dimorphism, second pereopod, *Pontonides*

unciger. 8599

sexual dimorphism, *Triturus* spp. 6273

- Polymorphism, contd.,**
soluble lens protein in *Salvelinus*, 856
Stercorarius parasiticus, Arctic, 8022
Xanthidium regulare, 4631
- Polymorphus**, 8579
- Polynema**, 8607
- Polynemidae**, distribution, Indian Ocean, 4473
- Polyodon spathula**, 6721
visual cells, 4474
- Polyonyx**, 5978
- Polyonyx pygmaeus**, 4022
- Polyopisthocotylea**, 5881
- Polyopedilum deletum**, water level effect, Lake Kariba, 4100
- Polyphosphate ADP kinase**, *Ankistrodesmus*, 3226
- Polyphosphate bodies**, *Plectonema boryanum*, 531
- Polyphosphates**, *Anacystis nidulans*, 1025
- Polyphysa cliftoni**, 5690
- Polyplacophora**, 6162
- Polyplotdy**,
Poeciliopsis, 2330
sorbitol dehydrogenase isozymes, *Clupea harengus*, 6386
- Polyprion oxygeneios**, 8051
- Polypterus senegalus**,
development of venous system, 468
neurohypophysis, 2345
respiratory function swim-bladders, 3698
- Polysaccharide inclusions**, *Spirostomum*, 624
- Polysaccharides**,
eggs, *Rana pipiens*, 2859
invertebrates, Japan Sea, 7618
microbial hydrolysis, 2487
- Polysiphonia**, 7537
hybrids, 6790
- Polysiphonia denudata**, 8281
- Polysiphonia lanosa**, rhizoids, 4716
- Polysiphonia obscura**, 8384
- Polysiphonia subtilissima**, 8281
- Polystrata fosliei**, distribution, Caribbean Sea, 3273
- Polysyncraton bilobatum sp. n.**, Glenan Archipelago, 4208
- Polytomella agilis**, ultrastructure, 2526
- Polytomella caeca**, chloramphenicol effects on growth and mitochondrial function, 5725
- Pomacea canaliculata**, 8233
- Pomacentridae**, intestinal convulsion, 6494
- Pomacentrus otophorus**, redescription, Caribbean, 4425
- Pomatius**, 7019
- Pomatoceros triqueter**, fouling, 3874
- Pomatoleios**, 3975
- Pomatoleios kraussii**, 3975
- Pomatomus saltatrix**, 5402
- Pomatoschistus lozanoli**, culture, 6513
- Pomatoschistus (Gobius) microps**, salinity, preference and tolerance, 903
- Pomatoschistus minutus**, culture, 6513
- Pomoxis**, 8158
- Pomponema reducta sp. n.**, 5921
- Ponds**,
algae of small temporary ponds, 1744
amphibian population studies, 2046
automatic fish feeder, 7248
bioassay and persistence, Dursban, 6654
brown-water ponds, 3102
circular concrete, 5183
Cyanophyceae blooms and O₂ regime, 2488
ecology, Trichoptera drift fauna, 8436
fish population interaction, 2948
fish, role of soil in production, 2376
fish tanks, Ceylon, 5185
increasing productivity, 2931, 2933
limnology, southeastern Louisiana, 9061
phytoplankton of alkaline waters, Chad, 9049
production, *Cyprinus carpio*, 7320
productivity, 3074
productivity, role of soil, 2371
saline, development of gametophytes of *Alaria* and *Hedophyllum*, 1784
waste-stabilization, fungi, 3144
weed control, United States, 3558
- Pontaralia beklemichevi gen. et sp. n.**, calyptorhynchid relict, Ponto-Aralo-Caspian Bassin, 1862
- Pontellidae**, distribution, Pacific Ocean, 6948
- Pontinus castor**, 5412
- Pontinus leda**, 5412
- Pontinus macrolepsis**, 5412
- Pontinus pollux**, 5412
- Pontocella abyssicola**, records from western Mediterranean, 4014
- Pontogammarus**, 4936
- Pontogammarus maoticus**, energy balance, Sea of Azov, 4963
- Pontogammarus robustoides**, reproduction and fertility, 4076
- Pontogenia chrysocoma**, 8522
- Pontomya**, 8607
- Pontonema vulgaris**, anatomy of digestive system, nutrition, 6914
- Pontonides umiger**, sexual dimorphism in second pereopod, 8599
- Pontoniinids**, commensal, gorgonian, Indo-Pacific, 4909
- Pontophilus norvegicus**, larvae, 6986
- Pontoporeia affinis**, food of *Myoxocephalus quadricornis*, Wisconsin, 4418
- Pontoporeia affinis**, 9069
- Pontosudis quadrimaculata sp. n.**, description, 944
- Popanoceras**, 6154
- Population control**,
Acanthaster planci, Indo-Pacific, 6167
antifouling liquid, 4562
antimitotic agents, *Tetrahymena pyriformis*, 3899
aquatic weeds, 4797
bacteria by organo-tin metal carboxylase, 5795
biological, pond weed, 3561, 3563
biological, weed control, Europe, 3562
Cancer magister by insecticide, 4033
chemical, algicides, 6732
chemical, Hirudinea, 4871
chlorine, cooling water of power stations, 5030
Cyanophyceae, Netherlands, 3199
fermentation, 4600
herbicide metabolism, *Tapes philippinarum*, 3480
Ichthyophthirius, carp, 3645
Ichthyophthirius, ponds, 3319
natural, snails, by *Lepomis microlophus*, 3451
parasites, *Lernaea cyprinacea*, 3362
Pistia stratiotes, Nigeria, 6827
schistosomiasis, *Marisa cornuarietis*, 5009
treatment of waste organic chemicals, 5793
use of Fintrol-5, *Cyprinodon*, shrimp-oyster ponds, 6552
use of rotenone, Finnish lakes, 5306
weed control by fish, 3564
weeds, Na salt, 3309
weeds, *Pseudomonas aureofaciens*, 4600
- Population density**,
effect on growth rate in *Porphyra*, 1083

Population density, contd.,

Trichoptera. 6070

Population density control, intestinal fluke,

Crepidostomum farionis. 5293

Population density influences,

overcrowding, mosquito larvae. 6075

stalk division, *Acetabularia mediterranea*. 4641

Population dynamics,

algae. 8285

Arctoscopus japonicus, Japan. 7350

bacteria in fishfarms, USSR. 4282

benthos, Baltic Sea. 5546

brackish water environment, *Hyadesia fusca*. 7835

Crustacea, simulation using computer. 6603

Deirochelys reticularia. 2892

Eurycercus lamellatus, Lake Narooh. 8542

exploited cultures, Calanoida. 5961

larvae and benthic forms, zooplankton, Caspian Sea. 7431

Limanda herzensteini, Niigata Region, Japan. 7399

maturation division, *Acipenser oocytes*. 9021

Mya arenaria, Black Sea. 5023

Noctiluca, Brittany coast. 7560

Oxytrema proxima. 6123

Paromalostomum. 128

phytoplankton, Aral Sea. 4490

phytoplankton, Caspian Sea. 6598

phytoplankton, Gulf of Aden. 5491

phytoplankton, White Sea. 8229

phytoplankton, Wilson Reservoir, Kansas. 8220

Pisces, lakes. 8867

Pisces, Lake Erie. 7233

Pisces, Lake Kizaki, Lake Nakatsuna. 7234

plaice, dab, Loch Ewe. 4469

Pleurocera acuta, Kentucky. 5011

Rotifera, lakes Herastrau, Floreasca, Tei, Romania. 8519

scleractinian association. 4845

Scrobicularia plana, North Wales. 7090

stochastic model. 4522, 4561

temperature effects, *Brachionus calyciflorus*. 5925

water fowl, relation to land use and water level, USA. 8818

zooplankton, Caribbean Sea. 6605

Population ecology, frog. 306

Population estimates,

abundance, *Carcinus maenas*. 6008

abundance, Cottus, Lake Tahoe. 3655

abundance, herring, Atlantic. 5235

abundance, Mie Prefecture, Japan. 8184

abundance of year classes, spring herring, Gulf of Riga. 5250

abundance, phytoplankton. 8221

Acetabularia mediterranea, Adriatic. 4637

age and growth, *Eopsetta grigorjewi*, Japan. 7392

age and size at sexual maturity, *Glossogobius, giurus*. 3681

age classes, *Mugil cephalus*, Gulf of California. 7406

age composition, mackerel, Japan. 8160

age distribution, *Molone americanus*. 5401

age distribution, *Prionotus evolans*, Chesapeake Bay. 6514

age distribution, *Sebastes* spp, Barents Sea. 5413

age groups average lengths, India. 4281

age, *Harpodon nehereus*, Hooghly Estuary. 7327

aging, *Merluccius bilinearis*, Gulf of Maine. 6485

aging, *Oncorhynchus nerka*. 6414

Anguilla rostrata, New Jersey. 7386

aquaculture, Florida. 5178

Arctoscopus japonicus, Japan. 7350

bacteria, Florida. 6680

bacteria in culture. 5792

bacteria, Kuroshio current. 5773

bacterioplankton, Danube. 6592

Balaenoptera acutorostrata, Antarctic. 8839

Balaenoptera borealis, Antarctic. 8840

benthos, River Danube. 8435

biocoenoses, Icelandic thermal waters. 6612

biomass and species diversity, zooplankton, Kola Peninsula. 7432

biomass, euphotic zone, microbial, North Pacific, subarctic. 8403

biomass, plankton, western Mediterranean. 4496

capture-recapture, *Homarus americanus*. 7772

capture-recapture method. 8264

carp-bream, Istra reservoir. 8955

changes in sex ratios, *Limanda aspera*. 9035

Chionoectes opilio, Japan Sea. 6967

Clupea harengus, Isle of Man. 5261

Clupea harengus, Maine. 6384

Clupea harengus, West Atlantic. 8902

Clupea sprattus, British Isles. 7297

Cololabis saira, Pacific. 8046

Coregonus clupeaformis, Minnesota. 7273

Crustacea, Lake Balaton. 6946

crustacean zooplankton. 7433

diurnal variation in availability, *Sebastes mentella*. 6523

eggs, Cladocera, Lake Yuno-Ko. 6938

English sole, British Columbia. 6575

Euglenoidina spp. 6851

fauna, Seychelles. 5549

fishes for Kamaboko processing, New Zealand. 8051

fishing industry, *Melanogrammus aeglefinus*, Iceland. 5361

Gadus morhua, Arcto-Norwegian waters. 5351

Gadus morhua, Arkona Sea and Mecklenburg Bay. 5377

Gadus morhua, Baltic. 5356

Gadus morhua, Baltic Sea. 5359

Gadus morhua, Barents Sea. 5353

Gadus morhua, Bornholm and Arkon basins. 5376

Gadus morhua, Greenland. 6481

Gadus morhua, Gulf of Maine. 6484

Gadus morhua, Iceland. 5347-5350

Gadus morhua larvae, Baltic Sea. 5357

Gadus morhua, Lofoten and Barents Sea. 5352

Gadus morhua, North Atlantic. 6482

Gadus morhua, North Sea. 5355

Gadus morhua, west Scotland coast. 5354

Gadus merlangius, North Sea. 5371

Gadus merlangius, Scottish west coast. 5370

general, *Esox lucius*, Lake Windermere. 4318

Haliotis discus hannai, Japan. 7862

herring, Atlantic. 5236

herring larvae, plankton, settlement volumes, Schlei. 5508

herring, North Sea. 5246, 6383

invertebrates, Shropshire hill stream. 4515

Lates mariae, Lake Tanganyika. 6500

length frequency, *Lethrinus nebulosus*, Wadge Bank. 5397

length-weight relationship, *Reinhardtius hippoglossoides*. 5474

Limanda ferruginea, New England. 6567

Melanogrammus aeglefinus, Arcto-Norwegian

Population estimates, contd.,

- waters. 5363, 5364
- Melanogrammus aeglefinus*, Barents Sea. 5362
- Melanogrammus aeglefinus*, Faroe Islands. 5365
- Melanogrammus aeglefinus*, North Sea. 5367-5369
- Melanogrammus aeglefinus*, Scottish west coast. 5366
- Merluccius productus*, Pacific. 8047
- method, phytoplankton. 5499, 5502
- microbial biomass in euphotic zone. 6803
- Mizuhopecten yessoensis*, Spisula, Japan. 6142
- Mytilus*, Ireland. 5026
- nematodes, drying beds. 8516
- Notropis atherinoides*, Canada. 7338
- Oncorhynchus masou*, Japan Sea. 7281
- Oncorhynchus nerka*, Kamchatka river Basins. 8917
- optimum concentration of gametes, *Pecten maximus*. 6148
- optimum escapements, *Oncorhynchus nerka*, Alaska. 6419
- Oxytrema proxima*. 6123
- Pacific walrus. 7226
- Panulirus argus*, Brazil. 6037
- Parophrys vetulus*, California. 5463
- Parophrys vetulus*, Puget Sound. 6577
- Penaeidae, USA. 7798
- Penaeus orientalis*. 6982
- phytoplankton, Belwood Reservoir, USA. 6607
- phytoplankton, North Sea. 5488
- phytoplankton, Spitsbergen. 5497
- phytoplankton, water supply of steam electric lake. 5487
- phytoplankton without pigments in extractions. 5498
- Pisces. 7271, 8036
- Pisces, Cuba. 8857
- Pisces, North Sea. 8973
- plankton biomass, Louisiana. 6596
- plankton, Kiel Bay. 5486
- plankton, North Sea. 5483
- plankton variability. 9042
- Pollachius virens*, North Sea. 5380, 5383
- Pollachius virens*, Norwegian sea. 5379
- production, *Cyprinus carpio* in ponds. 7320
- production, Salmonidae, Scotland. 5304
- rate of mortality, graphical estimation. 4559
- rate of reproduction, *Leuciscus*, *Rutilus*, *Abramis*. 7333
- recruitment, *Oncorhynchus nerka*, Alaska. 6420
- Reinhardtius hippoglossoides*, Barents Sea. 5473
- resource estimation, Venezuela. 4279
- Salmo*, Greenland. 8863
- Salmo*, River Teify. 5305
- Salmo*, *Salvelinus*, Au Sable River. 6434
- Salmo salar*, Maine. 6432
- Salvelinus fontinalis*, Maine. 7296
- Schlei. 5508
- Scomber scombrus*, North Sea. 5411
- Scomberesox saurus*, Atlantic. 5476
- Scomberesox saurus*, North Atlantic. 5475
- seasonal fluctuation, plankton, Lake Pääjärvi. 5485
- Sebastes*, Newfoundland. 6522
- Sebastes*, North Atlantic. 5509
- sequential sampling. 9107
- sex ratio, *Homarus americanus*. 6023
- size at maturity, *Homarus americanus*. 6023
- size composition, *Homarus americanus*. 6023
- size distribution *Sebastes mentella*. 6523
- size distribution, *Terebratalia transversa*. 3499
- spawning, *Gadus morhua*, Baltic Sea. 5358
- spawning population, plaice, North Sea. 5465
- standing crop, brackish water environment. 3582
- standing crop, *Clupea sprattus*, Baltic Sea. 5257
- standing crop, Gulf of Taranto. 5551
- standing crop, *Micropterus salmoides*, Iowa. 6504
- standing crop, phytoplankton, epipelagic algae, Somerset. 3191
- standing crop, zooplankton, Pacific. 3719
- stocks, *Gadus* spp Northeast Atlantic. 8865
- surface diatoms, Kuroshio, Japan. 8309
- tag recoveries, Iowa. 6321
- tagging experiments, *Anoplopoma fimbria*, California. 5491
- tagging, *Homarus gammarus*. 8582
- Thunnus, Atlantic. 5422
- Thunnus, Baja California. 9011
- Thunnus, *Euthynnus*, Auxis, Gulf of California. 9010
- Trachurus symmetricus*, California coast. 6532
- Trichoptera. 6070
- tuna, Hawaii. 7377
- use to estimate allowances, *Salmo* sp. 6426
- year classes, *Clupea sprattus*, Baltic Sea. 5257
- Zalophus, California. 7223
- zooplankton, Baltic and Gulf of Riga. 5507
- zooplankton biomass, Arabian Sea, Bay of Bengal. 5506
- zooplankton, Hawaii. 9052
- zooplankton, Iowa. 6606
- zooplankton standing crop, North Sea. 5483
- ## Population estimation,
- Ichthyomyzon fossor*, Lake Superior. 7251
- movement, benthos, *Emerita analoga*, USA. 7762
- ## Population genetics, (see also genetics)
- molecular evolution. 4357
- ## Population studies,
- amphibia. 2046
- amphibia, Zürich lakes. 2066
- annual production and respiration. 3077
- Balanus balanoides*, French coast. 2637
- benthic algal, effects of grazing by *Strongylocentrotus*. 2033
- Bufo calamita*. 2050
- Bufo viridis*, *Bufo calamita*. 7156
- Cerastoderma edule*, Sea of Azov. 6133
- Clupea harengus*, Pacific Ocean. 8904
- competitive structure of communities in Protozoa. 623
- Diaphus garmani*, Christmas Island. 7390
- differences between ictalurid populations defined by blood group antigens and antibodies. 874
- ecological energetics of *Leptodora kindtii*. 1670
- ecology of exposed *Nucella lapillus*. 6122
- estimating survey efficiency. 3173
- fish ponds. 2948
- fluctuations in *Patella safiana* on Spanish coasts. 1995
- Gonyaulax pacifica* from Bay of Bengal. 3851
- heterogeneous microbial populations, growth kinetics. 1702
- intertidal sandy-beach community, North Carolina. 494
- Jaera albifrons*, Baltic. 4937
- Jaera albifrons*, Sweden. 4937
- Jaera lalandii*. 193
- length/frequency distribution. 2969
- Leptophlebia cupida*, Canada. 6084
- Limanda Herzensteini*, Japan. 7400
- lobster stocks, New England. 2648
- Loligo pealei*, mid-Atlantic Bight. 2025

Population studies, contd.,

- Marinogammarus marinus*, Oosterschelde. 6029
 models, age structure, Daphnia. 3174
 of insects in water-filled tree holes. 2721
 of *Pandalus borealis*, Bering Sea and Gulf of Alaska. 2675
 on diatoms maintained in a dialysing enclosed space. 535
 on *Lirceus fontinalis*. 2649
 on *Macrobrachium malcolmsonii*. 2652
 on plankton of 2 ponds. 473
Pandalus borealis protandric hemaphrodites. 2693
Paramecium aurelia adapted to CaCl_2 . 621
Parophrys vetulus, Puget Sound. 5464
Penaeus aztecus abundance, Gulf of Mexico. 2674
Penaeus (prejuvenile) Galveston estuary and Gulf of Mexico. 2692
 predator/prey relationships. 2776
Protothaca staminea, California. 2804
 Rhine. 6616
Salmo salar, Newfoundland. 383
 sand microfauna. 3126
 sex ratio, *Ondatra zibethicus*. 7221
Strongylocentrotus spp., South California. 4188
Unio crassus, Nera River. 2019
Unio tumidus, Crapina marsh. 2020
 year classes and fisheries. 2928
 zooplankton, Baffin Island. 480
Porcellana. 6978, 7749
Porcellanella. 6978
Porcellio dilatatus, differentiation of supernumerary pereopods. 4964
Pore system, in cell walls of *Closterium*. 1035
Porichthys cunculus. 5427
Porichthys notatus, photophores. 1648, 1649
Porichthys porosissimus, nest guarding behaviour. 4471
Porifera, 6870, 7656, 7660, 8241
 aggregation of cells. 8459
 D-arabinose. 7662
 associated microflora, Lago di Faro. 4831
 biosynthesis of protein. 6880
 cell adhesion. 6885
 cell aggregation. 6876, 6877
 cells. 6878
 cellular differentiation in embryogenesis. 6884
 check lists, Glenan Archipelago. 3903
 Chesapeake Bay. 5956
 Coelenterata, Silurian, Afghanistan. 7665
 coralline sponges from Jamaica. 3911
 effect of irradiation on formative processes. 114
 Glenan Archipelago, keys. 3904
 immunochemistry of cell surface. 4827
 in raw-water transmission pipes. 2578
 Jamaica. 6871
 New Zealand. 4824
 paleontology. 7657
 place in Metazoan evolution. 8460
 polyphyletism, Africa. 3323
 polysaccharides. 6875
 Sagami Bay. 7661
 ultrastructure of intercellular communications. 6883
 Vema Seamount. 2576
Porites. 4842
Porites exserta sp. n. 3923
Porites lobata; isolation of bacteria. 2582
Porites lutea. 5549
Porites mannarensis sp. n. 3923
Porites minicoiensis sp. n. 3923

- Porites porites**, feeding and respiration, Florida. 5874
Poritidae, new species from Indian Sea. 3923
Porolithon colliculosum sp. n., Japan. 4706
Porolithon orbiculatum sp. n., Japan. 4706
Porolithonmannella curvimandibulata sp. n., Bulgaria. 1967
Porolithonmannella cvetkovi, Bulgaria. 1967
Poromitra nigrofulvus retina. 3053
Poromya (*Dermatomya*) *canadensis* sp. n., diagnosis. 731

Porphyra,

- artificial culture, seawater medium. 3275-3278
 Conchocelis phase in culture. 1799
 disease caused by *Phythium*. 7588
 epibionts of *Nereocystis lueketeana*, cytology, Bering Sea. 8386
 light-induced changes in thylakoid membrane. 5731

Porphyra leucosticta

, ultrastructure of Conchocelis stage. 4717

Porphyra miniata

, life history. 4718

Porphyra perforata

. 4588

Porphyra seriata

, conchospores. 2547

Porphyra tenera

,

- artificial mass culture. 1083
 mitosis. 3274
 photosynthesis. 6791

Porphyra umbilicalis

. 8387

Porphyridium

,

- comparative ecological study. 4720
 fixation of phycobiliproteins to photosynthetic membranes. 5751
 pigments and salinity. 1084
 ultrastructure of chloroplasts. 4719

Porphyridium cruentum

, 8387

- pH-dependent association of phycoerythrin. 7542
 phospholipase D. 6792
 phycoerythrin properties and ultrastructure. 4721

Porphyrosiphon notarisii

. 4604

Porpita

, food and ecology. 4846

Portugal

,

- estuaries, primary production. 1679
 Heteroptera ecology. 3425

Portunidae

, distribution, Biscayne Bay. 4032

Portunidae

 spp. n., Tonkin Gulf and Hainan Island. 6985

Portunus binoculus

 sp. n., from Caribbean. 203

Portunus depurator

, variability in filament from muscle fibres. 4078

Portunus euglyptus

. 8577

Portunus puber

, anomaly of chelae. 4965

Portunus sanguinolentus

, anatomy of digestive system. 6987

Portunus trituberculatus

, production of 11-keto-testosterone, ovaries. 6988

Portunus xantusii affinis

, tropical Pacific. 7802

Posidonia oceanica

, 7606, 7607

- French Mediterranean. 3839

Postelsia

. 4590

Posthodiplostomum cuticola

. 4370

Posthodiplostomum minimum

, 3662

- effect on serum proteins of *Lepomis macrochirus*. 898

Potable water supplies

,

- bacteriological problems. 8407
 control. 6802
 standards, Canada. 9082
 tests. 3139

Potamilla torelli

. 3973

Potamiscus cognatus

. 6046

Potamocypris villosa

. 8606

Potamodytes

. 8607

- Potamogale velox*. 7692
Potamogeton. 5813, 7437, 8137
Potamogeton crispus. 3710
Potamogeton filiformis. 4776
Potamolepidae, Africa. 3323
Potamolepis. 3323
Potamon. 8576
Potamophloinae. 6869
Potamophloios. 6869
Potamophloios stendelli. 3323
Potamophylax. 3428, 4977
Potamopyrgus antipodum, distribution in water temperature. 1997
Potamyodytes. 8607
Potassium, 6241
 effect on inactivation of sodium currents in squid giant axon. 2029
 fluxes, Chara. 4644
 fluxes in dialysed squid axons. 2030
 influx, of *Elodea densa*. 4784
 inhibitory effects on sodium transport across toad bladder. 2052
 movement across amphibian lens. 2867
 requirements, culture, *Scenedesmus quadricauda*. 7523
 use of rubidium as indicator, *Elodea densa*. 6821
Poteriochromonas stipitata,
 effects of amitrol on chloroplasts. 6746
 effects of 2, 4-D on morphology. 6745
 influence of amitrol in non-herbicidal range, of protein synthesis. 6744
Poterioochromonas malhamensis comb. n. 3811
Potomaphloios gen. n., (Porifera). 6869
Potorous tridactylis. 8087
Povilla,
 nymphs. 7437
 Volta Lake. 3724
Power stations,
 destruction of phytoplankton in cooling water supply. 5487
 thermal effluent, effect of benthos, Oklahoma. 9086
 thermal pollution, California. 5582
 thermal pollution, Mississippi. 5580
 thermal pollution, Pacific coast. 5581
 use of chlorine in cooling water, mollusc control. 5030
Pracyclops fimbriatus. 6946
Prasiola stipitata, ecology, life history, morphology. 8362
Prawns, lunar periodicity and abundance, Godavari estuary. 4070
Praxillella. 7440
Prayola tottoni gen. et sp. n. 3935
Predation,
 and abundance of *Pandalus jordani*. 2667
 function of operculum, *Thais lapillus*. 4134
 hole-boring, *Octopus vulgaris*. 2813
 incidence in intensity of predation on triclads. 3946
 on triclads in small pond. 644
 selective, maintenance of feeding niches. 6604
Predators,
 Acanthaster planci, Indo-Pacific. 7914
 Acanthocyclus viridis, growth. 3354
 Alestes baremoze. 8127
 Balanus, *Thais*. 5982
 Calidris maritima feeding on *Collembola*. 2710
 Colisa lalia. 8167
 Dermasterias imbricata on *Strongylocentrotus purpuratus*. 8712
 effects of alarm substance, Cyprinidae. 8935
 feeding behaviour of *Hymenocera picta*. 6027
 feeding behaviour, *Rhinichthys atratulus*, Kentucky. 6479
 Gasterosteus aculeatus, evolutionary effects. 5450
 Lake Barberspan. 3636
 Lucioperca. 7364
 Lucioperca, Lake Balaton. 7365
 micronectonic fish, Indian Ocean. 4306
 Micropterus salmoides, *Pimephales promelas* infected with *Clinostomum marginatum*. 7339
 Nucella lapillus. 6122
 Octopus bimaculatus, California. 3489
 of corals. 3325
 Opsariichthys uncirostris predator on *Plecoglossus altivelis*, Lake Biwa. 7340
 Phalacrocorax carbo novaehollandiae, Otago. 4255
 Pisces on Crustacea, California. 8041
 predator/prey relationships using *Thais*, *Acanthina*, *Mytilus*, *Septifer* and *Balanus*. 2776
 Ptychocheilus oregonensis, control by electrical barriers. 8180
 reduction, effects on *Salvelinus* and *Salmo*, Au Sable River. 6434
 Salmo, *Salvelinus*, California. 7295
 Scrobicularia plana. 7091
 Scrobicularia plana, North Wales. 7090
 sharks in tuna grounds, Indian Ocean. 5206
 Stylochus ellipticus, on oysters. 5920
 Utricularia predation of *Schistosoma mansoni* miracidia. 7685
 zooplankton by *Dorosoma cepedianum*. 6388
Predictions, catch, yellowtail, Japan. 8184
Preparation for microscopy, freeze drying, Ostracoda. 6064
Preservation, 4278
 amino acid treatment. 6354
 bacteria, vacuum drying. 7570
 chemical methods. 7250
 chemical treatment. 4274
 cleaning of *Trachurus trachurus* with surfactants. 9007
 cold, alterations in proteins. 4284
 cold, freeze dried cod steaks. 4283
 crab cake mix. 8565
 dehydration. 6350, 6354
 dimethylamine effects, *Gadus* spp. 8971
 drying, *Katsuwonus pelamis*. 8190
 enzymes, Mollusca. 5031
 fish. 8059
 fish, sorbic acid in salted fish. 3587
 fish, use of ammonia. 5189
 foodstuffs with nitrous oxide. 6347
 fresh fish. 800
 freeze-drying. 6339
 freezing. 6130, 6339, 6350, 6517
 freezing, *Crassostrea gigas*. 7572
 freezing, *Hippoglossoides*, *Gadus morhua*. 5187
 freezing, *Mugil cephalus* filets. 3694
 freezing, tuna. 3683, 7379
 heat. 4274
 heat, *Pandalus borealis*. 3371
 inhibition of *Bacillus subtilis*. 5191
 irradiation, food. 8412
 irradiation, Gulf oysters. 6130
 irradiation, *Melanogrammus aeglefinus*, *Gadus morhua*. 5372

Preservation, contd.,

- nitrofurantoin derivative effect on spores. 3295
- on-board handling, halibut. 5472
- plastic embedding. 5599
- salting. 6808
- shrimps. 4025, 6997
- smoking, fish. 8895
- use of antibacterial agents. 7250
- vacuum drying of bacteria. 7570
- variation in length, *Penaeus aztecus*. 4069
- Vibrio parahaemolyticus* in crab and meat, Chesapeake Bay. 7576
- whole mounts, Mollusca. 4998

Pressure,

- effect of helium on *Chlorella sorokiniana* at different pressures. 3823
- effect on photosynthesis, algae. 4588
- effect on synchronous cultures of *Tetrahymena*. 1147

Priacanthus cruentatus. 4524

Priapulus caudatus, O₂ uptake. 2617

Primary productivity,

- algal association. 5518
- algal strains by characteristic constants. 8287
- and inorganic phosphate. 3078
- Arabian Sea. 2383
- chlorophyll analysis, phytoplankton. 8227
- coldwater reservoirs, California. 3723
- comparison with synthesis rate of organic cell components, phytoplankton. 9057
- Diatomaceae. 5672
- diurnal curve. 8263
- effect of fertilizers. 3079
- Eisenia bicyclis*, Japan. 7531
- energy efficiency. 2363
- growth rate as measurement, algae. 7486
- Haliotis midae*, South Africa. 3442
- hydrochemical regime, White Sea basin. 6609
- in fish culture. 2374
- India, post-monsoon. 3721
- Kuban River. 9054
- Laguna de Bay. 3722
- Lake Chad. 4501
- Lake Mariut, Egypt. 5515, 5516
- Lake Tahoe, California. 3072
- measurement by dissolved oxygen. 8225
- measurement method. 1676
- measurement of species composition. 8226
- measurement, use of isotopes. 8228
- meridian 170° E between 20°S and 5°N. 5520
- Mettur Dam. 4503
- micro-ecosystems. 2407
- Mizuhopecten, *Spisula*, Japan. 6142
- northwest Atlantic. 1677
- Ogac Lake, Baffin Island. 482
- Onondaga Lake, New York. 3127
- optimum conditions, algae. 4595
- Pacific Ocean. 9056
- Parophrys vetulus*, Puget Sound. 6577
- Phaeophyceae. 3256
- phytoplankton, Kuroshio. 5501
- phytoplankton, Lake Vyalozero. 6610
- phytoplankton, Wilson Reservoir, Kansas. 8220
- reedswamp. 4775
- Rhodophyceae, Marshall Islands. 7534
- Salmonidae, Scotland. 5304
- Sargassum, Carolina coast. 3261
- standing crops of phytoplankton, Belwood Reservoir, USA. 6607
- Tagus and Sado estuaries, Portugal. 1679

variations, Bering Sea. 5519

world oceans. 6608

zooplankton. 5517

Pringsheimiella scutata. 5622

Prionace glauca, bicephaly. 5214

Prionocidaris baculosa, reproductive periodicity. 277

Prionospio. 4533, 7440

Prionospio banyuensis sp. n., Mediterranean. 4868

Prionospio japonicus. 6625

Prionospio pinnata, feeding by *Ilisha indica*. 4320

Prionotus evolans, age and growth, Chesapeake Bay. 6514

Prionotus stephanophrys, distribution, Columbia River. 3668

Prionurus punctatus. 4524

Prismatic region, *Mytilus edulis* and *Crassostrea virginica*. 2798

Pristidae. 8069

Pristina idrensis. 8524

Proalarioides tropidonotis,

Metacercaria in *Ophiocephalus marulius*, India. 8510

parasite of *Tropidonotus*, India. 5910

Proales. 4584

Proales reinhardtii. 8286

Proasellus. 8568

Probopyrus,

effect on *Hippolysmata wurdemanni*. 6025

pathobiology. 4047

Proboscis, *Argobuccinum argus*. 2743

Probythinella. 7060

Procambarus. 6990

bacteria. 1273

effects of phytoecdysones on moulting. 4968

spectral responses of sustaining fibres in optic tracts. 8600

Procambarus clarki, 3565, 6989

annual and proecdysial variations, urine production. 3379

carbohydrases. 1977

cholinergic inhibition of photoreceptors. 1923

colour encoding in the compound eye. 205

compensatory rotation of eyecup. 1272

degeneration and regeneration of motor neurons. 4969

discrimination by reticular cells. 6989

effects of plant growth hormones of moulting. 4967

function of the thoracic ganglion. 1271

light adaptation in photoreceptor. 204

morphological changes in epidermal cells during moulting. 4966

parallel septa in nerve fibres. 6047

potentiation of excitatory junctional potentials. 3380

sphingosine in nervous system. 7803

spontaneous activity of intestine. 4081

swimming. 6048

ultrastructure of heart. 7804

waning of escape response. 8601

Procambarus mexicanus, effect of calcium on

excitatory neuromuscular transmission. 8602

Procambarus simulans,

chemical control. 4080

light-induced changes, ovarian cycle. 3378

neurosecretory cells light-induced changes. 3378

Procaryota, phylogeny. 1014

Processing, *Pandalus jordani*. 197

Procladius. 3422, 5530

Procylopina. 4007

Procyon lotor, parasitism by *Procyotrema marsupiformis*. 5911

Procyotrema marsupiformis, parasite in Procyon. 5911

Productivity,

annual, animal populations. 3077

annual cycle of phytoplankton primary production in tropical seas. 963

Baltic Coast. 3159

benthos estimation. 2453

Ceratophyllum demersum. 4499

Ceratophyllum demersum, pH and P/R ratio. 4500

Chlorella, effect of total illumination. 2505

Cladocera, Kiev reservoir. 3982

control of eutrophication by plant harvesting. 9055

coral reef lagoon, Palau. 4498

dependency, of Mollusca. 4109

distribution of C¹⁴ in photosynthetic products; relationship to phytoplankton composition and photosynthetic rate. 961

Eichhornia crassipes. 609

epibenthic algal production and community respiration in Marion Lake sediments. 962

estimation. 2454

fish yield, Mettur Dam. 4503

fishing industry, zooplankton, Bay of Bengal and Arabian Sea. 5506

Gulf of Mexico, Caribbean. 3080

Gulf of Taranto. 4505

interaction of Ceratophyllum demersum and phytoplankton. 1674

Kuban River. 9054

Lake Mariut, Egypt. 5515, 5516

light effects, Ceratophyllum demersum. 4499

macrophytes, Marion Lake. 4502

marine, stimulated by waste heat. 3076

mating types, Tetrahymena pyriformis. 4820

Oncorhynchus tshawytscha, Columbia River hatcheries. 6425

organic matter, marine seaweed. 1675

Owiken Lake, BC. 483

Pisces, Aral Sea. 8864

plants growing in salt marshes. 490

sandspit ponds, Presque Isle. 4513

trout ponds. 3074

use of liquid scintillation, determination of ¹⁴C activity. 2366

Prolactin, in pituitary of migratory Oncorhynchus. 839

Promelas pimephales, herbicide effects. 3563

Promicrops itaiara. 8980

Prophytochironomus. 8622

Proprioceptors,

anatomy, Decapoda. 4915

Astacus leptodactylus. 5993

Prorocentrum. 3849

Prorocentrum micans, inhibition of synthesis by Asterionella japonica. 6798

Proscyllium. 4270

Prosimulium, larvae, decreased susceptibility to DDT. 7016

Prosimulium vernale, Maryland. 6072

Prosobranchia, structure and innervation, cephalic tentacles. 3457

Prostaglandin E1, effect on frog skin. 2875

Prostoma obscurum. 9069

Protamine kinase, Salmo gairdneri testis. 4336

Protease,

Chlamys hericulus. 7077

Dermasterias imbricata. 8713

effect on giant squid axons. 2818

enzyme-amplifying assay, sea urchin. 6183

Gadus spp. 8146

invertebrates. 7616

pyloric caeca, Oncorhynchus keta. 8914

Renilla reniformis. 1850

sea urchin embryos. 6184

specificity, Astacus. 179

Protection,

Amphiprion xanthurus. 5387

covering response, Evechinus chloroticus. 8717

function, toxin secretion, tail autotomy, Oxynoe panamensis. 8663

ink-gland, Lophotes cepedianus. 5454

reflectivity, Hydrolagus colliciei. 5211

steroids defence mechanisms, Ilybius fenestratus. 6083

Proteins, (see also Fish protein concentrate)

acid-soluble nucleotides, chromatographic analysis, fish. 8886

actin-like, eggs, Temnopleurus toreumaticus. 8723

actin-like, in eggs, sea urchin. 7127

active group, Mesoderm-inductive proteins, Amphibia. 3531

active group, neuro-inductive protein, Triturus pyrrhogaster. 5133

actomyosin and myosin, ATP sensitivity. 7322

actomyosin, Cyprinus. 6457

actomyosin solubility, Limulus. 8636

actomyosin superprecipitation, carp. 8953

algal sheath. 5637

amino acid, chymotrypsin, Chelydra serpentina. 8807

amino acid content of Chrysaora quinquecirrha nematocysts. 5866

aquatic grasses. 7314

blood, herring. 2964

blood plasma proteins, Trematomus, Distostichus, Antarctica. 4310

blood protein polymorphism, Sprattus sprattus. 6439

blood proteins, Scomber scombrus. 6513

blood, Rana esculenta, immunophoresis. 5105

blood serum, electrophoretic analysis, Macropipus puber. 7782

caerulein, Xenopus laevis, Leptodactylus pentadactylus. 6229

carotenoproteins, Decapoda. 7752

changes in absorbance spectrum, Phaeodactylum tricornutum. 8320

changes in protein concentrations, perivisceral fluid, Strongylocentrotus intermedius. 7922

changes, nuclear, Echinus. 4182

characterization of operculum, Buccinum undatum. 7850

Chlamydomonas reinhardtii. 8336

chloroplast, ribulose, 1,5-diphosphate carboxylase in Chlorella. 1775

chromatographic analysis, brain, Carassius auratus. 7302

chromatographic analysis, eyes, Pisces. 8879

chromatographic analysis, Salmo mykiss, C. gairdneri. 8927

chymotrypsins, Pseudemys elegans. 5146

chymotrypsins, turtle. 5141

collagen amino acids, Penaeus setiferus. 8597

collagen, Nereis japonica. 3348

collagen, spongin, Haliclona rosea. 5858

collagen synthesis, effects of prolactin, frog. 8803

collagen synthesis, prolactin effects, tadpole tail fin. 7195

comparison, Mytilus and Holothuria. 5024

Proteins, contd.,

composition of glycopeptides, *Loligo opalescens*. 8687
 contractile, isolated from *Tetrahymena*. 628
Cyanophyceae, nuclear magnetic resonance. 3206
 distribution, lenses, vertebrates. 7269
 egg, electrophoretic analysis, *Salmo gairdneri*. 6430
 egg-membrane lysis, *Tegula pfeifferi*. 7055
 endosymbiote particles, *Paramecium aurelia*. 4817
 enzymes, marine invertebrates. 7616
 evolution, haemolymph, *Carcinus maenas* during moulting cycle. 6965
 extraction process, aquatic animals. 3592
 fibrous, ectoderm, *Reptilia*. 8005
 fish protein. 5193
 fish protein concentrate as human protein source. 7246
 fish protein concentrate, Caribbean. 5175
 fixation of phycobiliproteins, *Porphyridium*, *Gloeocapsa*. 5751
 freezing point depressions, glycoproteins, *Trematodus borchgrevinkii*. 9008
 gel filtration, *Teleostei*. 7361
 genetic aspects of nonheme iron proteins, *Leucaena glauca*. 5729
 glycoproteins in digestive caecum of *Sphaeroma serratum*. 212
 glycosaminoglycans, degradation, tadpoles. 7947
 glycosaminoglycans, nonswelling corneal stroma, *Squalus acanthias*. 8884
 gradion hypothesis of allosterism, microtubules of heliozoan axopodium. 3878
 haemoglobin, *Cucumaria* spp., *Molpadia*. 8711
 haemagglutinins, invertebrates. 8434
 haemolymph, *Carcinus maenas*. 3387
 haemolymph, effects of *Sacculina*, *Carcinus*. 3388
 haemolymph, evolution during oogenesis. 6966
 haemolymph, *Portunidae*. 3386
 haemolysin, chromatographic analysis, *Chironex fleckeri*. 5865
 histamine formation during putrefaction. 5188
 histidine deaminase, *Scomber*, *Pseudomonas*. 6521
 histones, cytoplasmic, embryogenesis, *Triturus pyrrhogaster*. 6271
 histones, embryos, *Arbacia punctulata*. 8706
 histones, toad. 6220
 hyalin, sea urchin eggs. 6173
 hydrolysis of substrate in Kiev reservoir. 3856
 immunoglobulins, *Xenopus laevis*. 8788
 incorporation of thyroxine carbon, nervous system, *Rana catesbeiana* tadpoles. 7981
 inhibition by sorbitol and sucrose, during frozen storage. 7321
 Kamaboko, convertible fish, New Zealand. 8051
 keratosulphate degradation. 7854
 ketotestosterone, dehydroepiandrosterone, ovaries, *Mugil capito*. 6570
 Lorenzini jelly structure, *Raja*, *Cetorhinus*. 5216
 manufacture of defatted fish protein. 4275
 metabolism, embryos, *Echinarachnius parma*. 8715
 metabolism in relation to reproduction and moulting in *Paratelphusa*. 199
 monoamines, hypothalamus, *Entosphenus*, *Leucopsarion*. 6355
 monoamines, neurons, *Planaria*. 3337
 monoamines, stomatogastric ganglion, *Homarus vulgaris*. 3399
 monomeric, *Paramecium aurelia*. 4816
 muscle, changes during winter, *Cyprinus*. 8122

muscle, *Merluccius*. 3651
 muscle myogens, chromatographic analysis *Penaeidae*. 6039
 muscle, octopus. 3483
 muscle polymorphism, *Anoplopoma*, Pacific. 3654
 myoglobin, dolphin. 6312
 myosin, *Cyprinus*. 6456
 NAD, kinetics, dark-light transients, *Chlorella*. 5709
 notochord, *Amphioxus*. 7940
Notodarus hawaiiensis, from eye lens nucleus. 2027
 nuclear, biosynthesis during sea urchin development. 2036
 paramyosin, byssus retractor, *Mytilus edulis*. 8677
 patterns and metamorphic changes of serum, *Amphibia*. 6202
 peptide sequence, *Cyprinus*, *Gadus*, *Tilapia*. 8961
 permeability of eye lens capsule of *Thunnus obesus* to nuclear eye lens proteins. 7381
 phosphatins, *Oncorhynchus*, *Salmo irideus*. 5274
 phyllocaerulein. 7162
 polyamines, DNA. 4924
 polynucleotide-peptide complex, mitosis, *Chlorella vulgaris*. 6764
 Prasinogenin, from *Bohadschia koellikeri*. 7111
 protein metabolism, *Paratelphusa hydrodromous*. 4067
 protein separation, *Torpedo*. 4302
 proteolytic enzymes, *Chlamys hericium*. 7077
 retrobulbar fluid, crucian carp. 3007
 reversibility of thermal denaturation, *Delphinus delphis* ferrimyoglobin. 8831
 sarcoplasmic fish, *Sebastes melanops*. 9001
 sequences, phosphotransferases, *Homarus*, *Sipunculus*. 4931
 serum and haemolymph, *Pisces*. 8945
 serum, effects of temperature, *Fundulus heteroclitus*. 8205
 serum, *Sebastes*. 444
 soluble lens, *Amphibia*. 2886
 soluble lens, electrophoretic studies in freshwater fish. 857
 soluble lens, polymorphism in *Salvelinus*. 856
 soluble pigment, *Monodonta turbinata*. 8661
 soluble surface, *Paramecium*. 1836
Spirulina platensis. 5640
 storage by algae. 3854
 structural, trichocyst of *Paramecium*. 1154
 temperature adaptation, *Lebistes*, *Cyprinus*, *Perca*. 4309
Thunnus alalunga. 8868
 toxicants, *Gonionemus vertens*. 5869
 transferrin variants, *Merluccius productus*. 4391
 transport in optic nerve during regeneration, *Carassius auratus*. 7304
 tropomyosin isolation, *Gadus* muscle. 5385
 trypsin-like proteases, *Dermasterias imbricata*. 8713
 ultrastructure, DNA, trout. 5312
 ultrastructure, egg capsules, *Buccinum undatum*. 7852
Protein synthesis,
 amitrol effects, *Poteriochromonas stipitata*. 6744
Amphibia ectoderm. 7944
Artemia embryos. 1213
 cortical proteins in *Tetrahymena pyriformis*. 3900
 embryos, *Xenopus laevis*. 4250
 fertilized and unfertilized eggs of *Urechis*. 1205

- Protein synthesis, contd.,**
frog muscle. 317
inhibitors, eggs, Amphibia. 8737
initiation, chloroplasts, *Acetabularia mediterranea*. 7503
nucleic acids during gastrulation, *Pleurodeles waltlii*. 8758
sea urchins. 5051
Spriostomum. 8452
Spongillidae. 6880
unfertilized eggs of *Urechis*. 1204
- Proteocephalus**. 6549
Proteocephalus ambloplitis, penetration of parenteral plerocercoids. 5912
Proteocephalus filicollis. 5913
Proteocephalus longicollis. 8509
Proteocephalus pearsei. 6518
***Proterogyrinus scheelei* gen. et sp. n.**, (Anthraco-sauria), Carboniferous, Virginia. 7960
Proterosuchia, evolution. 8006
Protista, Belgian coast. 492
Protoceles luteola, monoxenic culture. 3338
***Protochondria longicauda* gen. et sp. n.** 5966
Protococcus, 9083
ultrastructure. 5726
***Protocryptochrysis* gen. et spp. n.**, (Cryptomonadina) China. 7644
Protogaleus. 4270
Protohaustorius deichmannae, ecology and life-cycle. 187
Protoheterotrophy, in *Cocconeis*. 1762
***Protolamellodiscus serranelli* comb. n.** 3940
Protonemura meyeri, larvae, activity patterns. 2726
Protoopalina caudata. 3875
***Protoplagiopyxis ridderae* sp. n.**, Iceland. 3316
Protopterus, regeneration. 6584
Protopterus aethiopicus, 6584, 8214
arginine vasotocin effects. 8214
efficiency, lungs, gills. 3699
neurohypophysis. 2345
respiratory movements. 1636
retina, mitosis. 7416
Protopterus annectens, 6584
visual cells. 4474
Protoraphidaceae fam. n. 5682
Protosiphon, effects of calcium and strontium on carbohydrate synthesis. 6769
Protosiphon botryoides, carotenoids and carotenoides-
ters. 4680
Prototheca, nitrogen metabolism. 573
Prototheca staminea, population studies, California. 2804
Prototheca zopfi,
destruction of cytochrome a₃ by light. 572
ribosome-specific transfer factors in cell-free
extracts. 4681
***Prototransversotrema steri* gen. et sp. n.**, (Digenea)
from *Aldrichetta forsteri*, South Australia. 8511
Protozoa, 6599, 7116, 7437, 7656, 8439, 8856, 9058
aggregation, Potomac River. 2564
cave-dwelling, Kentucky. 7622
caves, Belgium. 7621
caves, United States. 7620
cell viability. 4809
counting method. 3877
Danube. 2565
dispersal by Insecta. 4104
distribution, Iceland. 3316
ecological studies on rare plankton in the
Mediterranean. 3885
endosymbionts, frogs, Ohio. 7623
forest soil, Florida. 5827
fresh-water communities. 1828
hot spring fauna, Tiberias. 3317
keys to the lobose amoebas. 6840
model for activated process. 4550
new species of Testacea, Romania. 8726
nutritional requirements under axenic culture. 5845
parasites in fish. 1144
plankton, Germany. 6597
planktonic, Lake Tiberias. 2570
role in composition of zooplankton. 4493
thermal pollution, Potomac River. 4802
UV reactivation. 616
Protrachypene. 5171
Protula. 3975
Protula atypha. 3975
***Pruvotfolia pselliotes* gen. et sp. n.**, (Nudibranchia),
English Channel. 7872
Prymnesium. 3309
Prymnesium parvum, 6714, 8222
carbohydrate metabolism. 5683
toxins, purification. 4629
Psammecinus, 7108, 7113
development. 2830
fertilization kinetics. 5050
Psammecinus miliaris,
breeding and growth. 2829
feeding and control of volume within test. 273
Psammocora contigua. 5549
Psammocytes albicola, new record, Poland. 1196
Psammylla, proposed suppression. 194
Psammylla littoralis, proposed suppression of
littoralis. 194
Psamoryctes. 8524
Psectrocladius. 3422
Pseudacris triseriata,
metabolism. 2057
toxicity of pesticides to tadpoles. 7164
Pseudamnicola. 7023
***Pseudamnicola supercarinata* sp. n.**, Balkans. 7053
Pseudanthessius, associations with crinoids,
Madagascar. 8549
***Pseudanthessius angularis* sp.** 8549
Pseudanthessius madrasensis. 8549
Pseudanthessius major. 8549
Pseudanthessius minor. 8549
***Pseudanthessius rostellatus* sp. n.** 8549
***Pseudatractides pyriformis* gen. et spp. n.** 6091
Pseudaxinella. 4824
Pseudemblemaria, taxonomy. 7355
Pseudemys, acetazolamide, bicarbonate, bladder. 5151
Pseudemys concinna, blood serum cholesterol. 8810
Pseudemys elegans, 5141, 7174
chymotrypsins. 5146
Pseudemys scripta,
dietary shift. 3536
osmoregulation, isolated bladder. 7203
retinal oil globule count. 8811
seasonal changes in thyroid activity. 329
sodium transport across bladder walls. 5147
survival during anaerobiosis. 3535
valinomycin effects, bladder. 5149
water exchange. 3537
Pseudobacterium. 6679
***Pseudobaicalasellus* gen. n.** 8568
***Pseudobryopsis gracilis* sp. n.**, Solomon islands. 8280

- Pseudobryopsis myura*,
protonema with giant nucleus. 6752
reproduction. 607
- Pseudobryopsis solomonensis* sp. n., Solomon islands.
8280
- Pseudocalanus*. 9042
- Pseudocalanus elongatus*, Black Sea. 3989
- Pseudocalanus minutus*. 5957
- Pseudocentrotus*, 7124
Hatakeziama Island. 4177
- Pseudocentrotus depressus*, spermatozoa fractionations.
5049
- Pseudochirella*, distribution, Izu region. 4005
- Pseudochirella vervoorti* sp. n., distribution, Izu
region. 4005
- Pseudochlorella pyrenoidosa*, thermal adaptation of
photosynthesis. 1048
- Pseudochlorococcum* gen. n., (Chlorophyta). 8363
- Pseudochlorococcum polymorphum* sp. n. 8363
- Pseudochlorococcum typicum* sp. n. 8363
- Pseudochronidae*. 6488
- Pseudocreadium scaphosomum*. 4851
- Pseudocuma longicornis*, life-history. 185
- Pseudocycnidae*, Australia. 4890
- Pseudodiaptomus ardjuna*, naupliar development. 7731
- Pseudodiaptomus jonesi* sp. n., India. 5977
- Pseudoeurotium*. 6815
- Pseudogamy*, *Dugesia benazzi*, *D. lugubris*. 127
- Pseudogloiophloea*, dimorphic pit connections. 1093
- Pseudogloiophloea confusa*, pit connection formation.
1800
- Pseudogloiophloea okamurai*, thallus structure and
reproductive organs. 1085
- Pseudogloiophloea okamurai* comb. n., taxonomy. 4722
- Pseudolathyrus* cf. *discrepans*, southeast Asian waters.
7035
- Pseudolithoderma nigra* sp. n., California. 4699
- Pseudolithophyllum expansum*. 6631
- Pseudomesus* sp. n., Greenland. 7739
- Pseudomma japonicum*. 7743
- Pseudomonad*,
potassium-dependent deplasmolysis. 6810
transport and retention of potassium. 6809
- Pseudomonadaceae*,
peroxidase activity. 3857
use of fluorescent antibody technique in
identification. 5782
- Pseudomonas*, 3462, 3726, 3769, 3857, 3858, 5772,
6679, 6689
catabolism, trimethylaniline. 3299
production of lipo-polysaccharide, antibacterial.
5788
- Pseudomonas aeruginosa*. 5777, 8871
- Pseudomonas aureofaciens*. 4600
- Pseudomonas bromoutilis*. 5781
- Pseudomonas fluorescens*, 5777
histidine deaminase from muscle and liver. 6521
- Pseudomonas pseudomallei*,
distribution in soil and surface water. 1110
method for isolation from soil and surface water.
1109
- Pseudomonas putrefaciens*, bacteriophages. 1108
- Pseudomurraytrema* spp. n., Alabama. 5914
- Pseudomurraytrema coosense*. 5914
- Pseudomurraytrema copulatum*, parasite of *Hypentelium*
nigricans, Illinois. 5879
- Pseudomurraytrema etowanum*, parasite of *Hypentelium*
nigricans, Illinois. 5879
- Pseudomurraytrema fluviatilis*. 5914
- Pseudomurraytrema paradoxum* sp. n., parasite of
Hypentelium nigricans, Illinois. 5879
- Pseudoncholaimus*. 7694
- Pseudonycototherus*. 7623
- Pseudonycototherus corlissi* gen. et sp. n. 7623
- Pseudophryne semimarmorata*, acoustic interaction
between species. 8759
- Pseudopleuronectes americanus*,
anatomy and oocyte maturation type. 945
behaviour. 2331
electron microscopy, copper poisoning. 4475
winter mortality rates. 2332
- Pseudoplexaura porosa*, crassin acetate biosynthesis.
8475
- Pseudopoda*, in *Vexillifera bacillipedes*. 2571
- Pseudopolydora kemi californica* subsp. n., California.
4881
- Pseudoprotzia papillata*. 6091
- Pseudoptera*. 7874
- Pseudopythina rugifera*, structure and ecology. 263
- Pseudorashora parva*, effect of coloured lights on
catch. 6477
- Pseudorashora pimula*, relation between cortical
alveoli and yolk-nucleus, oocytes. 5289
- Pseudorea crassidens*. 7227
- Pseudorhombus oculocirris* sp. n. 7412
- Pseudoscaphirhynchus*, proposal to place on Official
list. 357
- Pseudosciaena*. 6489
- Pseudosciaena polyactis*, diurnal rhythm. 442
- Pseudoseaena axillaris*. 8156
- Pseudosquilla*. 4904, 5549
- Pseudosquilla oculata*. 7746
- Pseudostomella cataphracta* sp. n., Atlantic. 5933
- Pseudostomella indica* sp. n. 3953
- Pseudotolithus* (*Fonticulus*) *elongatus*, sexual
maturity and fecundity. 4426
- Pseudotriakis*. 4270
- Pseudovermis mortoni*, New Zealand and Solomon
Islands. 4132
- Pseudoxenomystax*. 9014
- Psilaxis*, taxonomy. 3449
- Psolus fabricii*, pigment chromatography. 8721
- Psychropotes*. 7115
- Ptereleotris tricolor*, distribution, Indian Ocean.
6515
- Pteria* (*Pinctada*) *martensii*,
epithelial cells of mantle. 746
formation of abnormal pearls and abnormal shell.
747
- Pteridines*, biosynthesis, tadpole, *Rana catesbeiana*.
7979
- Pterisiphonia*. 7537
- Pterocladia*. 6725
- Pterocladia capillacea*, effect of micronutrients. 2480
- Pterocladia pyramidale*, morphological variation. 1801
- Pterois*. 6371
- Pteromonas angulosa*. 6597
- Pteronoarcys californica*, cuticular lipids. 1960
- Pterophyllum eimekei*, continuous recording of
melanophore responses. 8998
- Pterophyllum scalare*, laser effects on melanophores.
7369
- Pteropoda*, 6605, 9052
accumulation of ions in shells. 6109
feeding. 4117
- Pterosiphonia gardneri* sp. n. 6726
- Pterosiphonia spinifera*, distribution, Marseille. 3281
- Pterosiphonia spinifera* var. *robusta*, Marseille. 7543

- Pterosperma*, 5490
Pterosperma parvareopunctatum sp. n., 5490
Pterothrissus belloci, leptocephali from Angolan waters, 820
Pterycombus brama thynniculina subsp. n., Guinea Gulf, 7370
Ptychadaena mascareniensis, 3509
Ptychadena longirostris, 3944
Ptychobothrium, parasite, Cyprinidae, Iran, 7684
Ptychocheilus oregonense, parasitism by Edlintonia ptychocheila gen. et sp. n., North America, 8500
Ptychocheilus oregonensis, electrical barrier to predation, 8180
Ptychodera flava, structure, nerve fibre layer and neurocord, 4211
Publications, Fisheries Division New Zealand, to 1968, 4285
Puccinellia, salt and flooding tolerance, 6828
Puerulus angulatus, 6981
Puerulus carinatus, rediscovery, 1274
Pumps, improvements, aquarium, 6708
Pungitius,
 chromosomes and enzymic patterns, 2321
 parasite resistance, 6562
Pungitius pungitius, 8513
 distribution, variation, Mogami Basin, 5469
 reproductive behaviour, Ontario, 4476, 5470
Pungitius tymensis, development of scutes, 8215
Puntius, 5417
Puntius gonionotus, 6478
Puntius javanicus, weed control, Far East, 3560
Puntius schwanefeldi, 4380
Puntius ticto, 7342
Puntius titteya, reproduction behaviour, 5344
Pupsikus, 8642
Purification, enzyme, protamine kinase, Salmo gairdneri, 4336
Purines, responsible for silvering in freshwater fish, 813
Purpura Bruguiere, type-sp., 728
Purpura (Thais) lapillus, shell boring with carbonic anhydrase, 2770
Purpuracea Menke 1828, suppressed, 728
Purpuridae Broderip 1839, preceded by Thaididae Suter 1913, 728
Purpurinae Swainson 1840, suppressed, 728
Purpurellus, taxonomy, 2771
Pusa sibirica, craniometry, 7224
Putrescine, amphibian, 2890
Pycnodonta hyotis, parasitism by Onuxodon parvibrachium, Seychelles, 6508
Pycnogonida,
 Crozet Island, 8634
 Greenland, 7837
Pycnogonidae, Ross Sea, 1965
Pycnogonum platylophum, 8634
Pycnopsyche spp., respiratory energetics in relation to water flow, 4106
Pylaiella litoralis, 8277
 iodine and bromine requirements, 1069
 vitamin B₁₂ requirement, 1070
Pyramimonas grossii, ultrastructure of tubular trichocysts, 8364
Pyramidomonadaceae, China, 8365
Pyrenees, Krenopsectra fallax gen. et sp. n. (Chironomidae), 1958
Pyrenoids, development and structure, 3821
Pyrenomycetes, Japan, 4767
Pyrgo, 5551
Pyrgopsis pacificus, 7897
Pyrmnesium parvum, 8856
Pyrocystis, cell wall structure, 4746
Pyrocystis lunula,
 absolute values of photon emission, 587
 bioluminescence, 1805
Pyrodinium bahamense,
 absolute values of photon emission, 587
 bioluminescence, 1805
 resting spore, 3290
Pyrolofusus deformis, Spitzbergen waters, 2772
Pyrosoma spinosum, distribution, South Pacific, 7142
Pyrrhophyceae, 5497, 6599, 7428
 Minnesota, 5754
 taxonomy, 6797
Pyrrhosoma nymphula, energetics of larvae, 2727
Pyruvate kinase,
 isozymes in tissues and eggs, Rana pipiens, 6262
 regulation in Euglena gracilis, 62
Pytheas rosea laevigata var. n., 3903, 3904
Pythiopsis, 7584
Pythium ultimum, 8418
Pyura pachydermatina, distribution, New Zealand, 7126
- ## Q
- Quadrula*, 7060
Quality, and pH of Ostrea lutaria, 2801
Quality control,
 bacteria associated with spoilage of salted fish, 6808
 bacteriological standards for fish and fishery products, 8871
 control of Salmonellae, 6340
 freeze-dried cod steaks, 4283
 improvements, vessel-caught groundfish, 3589
 quinaldine residue in fish, determination, 6344
 salt measurement, fish, 6337
Quebec, insect communities in a stream, 216
Quinqueloculina, 3883
Quisquilius eugenius, axial osteology, 2285
Quisquilius inhaca, distribution, Laccadives, 4303
- ## R
- Rabdastraea dura* sp. n., 3908
Raccus chrysops, food chain, Lake Winnebago, 5408
Racial studies, North Sea, autumn spawning herring, 2963
Radiation,
 adaptation in pigment composition and photo-synthesis by Chlorella in infra red, 1062
 γ, effects of exposure, eggs, Oncorhynchus tshawytscha, 8104
 effects of esutarine organisms, 9066
 genetic control of resistance, 5716

- Radiation, contd.,**
¹³¹I uptake by biota, Fern Lake, Washington. 4571
 in waste waters. 2433
Lebistes reticulatus, chromosomes. 4458
 lethality, survival curves for *Dugesia lugubris*. 1174
 modification of whorl morphology, *Acetabularia*. 3223
 nutritive composition of Gulf oysters stores in ice. 6130
 sensitivity of *Tetrahymena pyriformis*. 1820
 tolerance, Amphibia. 6223
 X-radiation, *Ankistrodesmus braunii*. 5692
- Radicalingua thysanorhizans**, distribution, Berre Lake. 7544
- Radioactivity,**
 accumulation of Cs¹³⁷ by hyponeuston of the Black Sea. 614
 artificial, grey whales. 2897
Cystoseira barbata in Black Sea. 3835, 3836
 fallout in *Ostrea*, Villorita and Pila, India. 261
Laurencia coronopus in Black Sea. 3835, 3836
 pollution, North Adriatic. 4551
 radionuclides in salmon. 369
- Radioautography,**
 amino acids, *Echinaster echinophorus*. 8716
 carbohydrate oogenesis, *Nereis pelagica*. 4875
 fate of thyroxine iodine, *Rana pipiens*. 7172
 nucleic acid synthesis, gastrulation, *Pleurodeles waltlii*. 8758
 pellicular DNA, *Paramecium*. 4813
 skin glands, *Rita rita*. 6480
 spermatogenesis, *Phyllaplysia taylori*. 7869
Uca pugnax, melanogenesis. 6054
- Radiocaesium**, elimination, by *Lethocerus*. 705
- Radiocarbon dating**, of lake deposits in Western Victoria, Australia. 1759
- Radiography**, comparative analysis of vasodentine and mantle dentine in teleosts. 4387
- Radiolaria**, relation to *Nassellaria*. 6854
- Radiosphaera negevensis**, zoosporogenesis. 8366
- Radiospongilla crateriformis**. 3907
- Radiospongilla cynoica** sp. n. 3910
- Radiospongilla hispidula** sp. n. 3910
- Radix hamadai**, taxonomy. 1998
- Radula**,
 extraction and mounting. 223
 Mollusca, Taiwan Straits. 1973
 myoglobin in radular muscle, *Buccinum*. 719
Octopus vulgaris. 5038
 protractor muscle, electromechanical coupling, *Buscyon canaliculatum*. 7853
 replacement in gastropods. 2742
Urosalpinx cinerea. 2778
- Raeta**, review of genus. 264
- Raeta plicatella**, anatomy. 264
- Rainfall**, effect on *Penaeus* production. 2680
- Raja**, 6866
 1 α -hydroxycorticosterone stimulating Na transport across toad bladder. 809
- Raja batis**, ultrastructure, medullary command nucleus, electric organ. 6366
- Raja clavata**,
 ion effects on ureohydrolase. 5215
 Lorenzini jelly, glycopeptides. 5216
 ultrastructure, medullary command nucleus, electric organ. 6356
- Raja fyllae**. 5164
- Raja garmani**, egg capsules and reproductive biology. 4298
- Raja radiata**, serum factors toxic to *Acanthobothrium quadripartitum*. 8487
- Raja rhina**,
 chromatography, pituitary extracts. 6367
 differential blood flow through afferent branchial arteries. 7258
- Raja spinicauda**. 5164
- Rajidae**. 8069
- Rajonchocotyle emarginata**, larvae. 8512
- Ralfsia clavata**, *R. borneti*, life histories. 4703
- Ralfsia confusa** sp. n., California. 4699
- Ralfsia integra** sp. n., California. 4699
- Ralfsiaceae**, California. 4699
- Rallus aquaticus**, parasitism by *Leucochloridium papillocirratum* new species. 5905
- Ramalina reticulata**. 5726
- Ramphocorixa**. 7002
- Ramphus oxycanthae**. 8614
- Rana**, (see also **Frog**)
 7150, 7946, 8086, 8126
 Afghanistan. 5067
 anaesthetic. 6266
 ecology. 5115
 effect of methallibure on ovulation induced by pituitary extract in vitro. 318
 light reaction of isolated iris. 4226
 nature and localization of sodium pool during active transport in isolated skin. 7187
 observations on surround properties of retinal ganglion cells. 4227
 occurrence of Trypanosomes. 1149
 receptive field, ipsilateral tectum. 4228
 seasonal variation in muscle ion content. 4230
 spawn-eating by tadpoles. 6265
Triturus, *Xenopus*, ion exchange investigation. 4241
- Rana arvalis**,
 ecology, Netherlands. 8761
 habits, distribution, Fredrikstad. 5095
- Rana arvalis arvalis**, body size. 305
- Rana aurora**,
 parasitism by *Gyrodactylus aurorae* sp. n., California. 5903
 unusual aspects of sexual behaviour. 304
- Rana catesbeiana**, 6721, 7174
 AMP and phosphorylase activity in stomach. 311
 behavioural reflexes with large skin grafts. 6256
 behavioural temperature regulation. 4220
 biosynthesis of pteridines, tadpole. 7979
 effect of gastrin on gastric secretion. 7978
 effect of prolactin on thyroxine-induced metamorphosis. 7980
 effect of triiodothyronine on DNA synthesis. 321
 histology, median nucleus. 5097
 histopathology and skin allograft rejection. 6258
 home range and movements, Ontario. 3511
 hormone-stimulated amino acid incorporation by muscle. 2058
 immunochemical comparison of tadpole and frog haemoglobins. 2059
 incorporation of thyroxine carbon in protein, nervous system, tadpoles. 7981
 Na-K-ATPase in epidermis. 3514
 NMR study, sodium, muscles. 8763
 notochord of larva. 8762
 parasitism by *Lernea cyprinacea*, culture. 5098
 rhodopsin, photoreceptor. 4225
 sodium and chloride transport, tadpoles. 5099
 spectral sensitivity. 8764
 stimulation of gustatory units by calcium. 7165

- Rana catesbeiana**, contd.,
tadpole, biosynthesis of pteridines. 7979
tadpole, enzyme activities of tissues. 5100
- Rana clamitans**,
behavioural reflexes with large skin grafts. 6256
parasitism by *Cephalogonimus americanus*. 5102
parasitism by *Trypanosoma rotatorium*, Louisiana. 5101
- Rana cyanophlyctis**,
effect of hypophysectomy, ovariectomy, starvation and methallibure. 316
2nd intermediate host of *Artyfechinostomum sufrartefex*. 313
- Rana dalmatina**, modalities of growth of mesonephros in larva. 4222
- Rana esculenta**, 5614, 5615, 7145, 8768
alkaline phosphatase. 7168
anomaly P. 7167
antidiuretic hormone in bladder. 8765
bioacoustics. 307
effect of Amiloride on intracellular sodium content. 5103
effect of castration on oviduct. 5106
effect of fish excreta on larvae. 7166
enzymes. 8766
fat bodies. 3517
functional depending localization of some enzymes of the energy metabolism in skeletal muscle. 8767
host to *Opisthioglyphe endoloba*. 1177
immunology, blood proteins. 5105
influence of temperature on dilation capacity, frog. 7982
lithium chloride action on embryos. 4231
localization and function of enzymes. 4229
oestrogen in plasma. 8765
rod outer segments freeze-etching. 6246
seasonal changes in inorganic ions. 2060
skin, effects of oxytocin. 5107
taxonomy. 2061
telencephalon regeneration. 5104
triploidy. 7991
- Rana fasciculispina** sp. n., Thailand. 8760
- Rana hexadactyla**, 5457
enzyme regulation in kidney and liver. 3518
glycogen and lactate in denervated muscle. 7169
wound healing. 5457
- Rana lessonae**, Baltic coast. 8743
- Rana macroglossa**, taxonomy. 7170
- Rana macrodon**. 8517
- Rana maculata**, taxonomy. 7170
- Rana nigromaculata**, effects of carbon dioxide on gastric mucosa. 5108
- Rana ornativentris**, gonad development. 4232
- Rana pipiens**, 6721, 7145, 7175, 7970, 7984, 8087, 8773
action of adrenergic site-stimulating catecholamines. 5113
adrenergic receptors. 3513
amino acid uptake, rods. 2878
AMP and glycogenolysis in gastric mucosa. 312
AMP and phosphorylase activity in stomach. 311
changes in chromosomal DNA replication. 6252
changes in dermoepidermal junction in resorbing tail. 4240
chromatography, androgens. 7171
chromosome mapping. 7984
corticosteroids, dehydration in winter and summer. 7985
effect of adrenalin and ACh. 8778
effect of hypertonic solutions on skeletal muscle contractions. 7178
effect of long term starvation and acclimation temperature. 4234, 4235
effect of nicotine and compounds, abdominis muscle. 7177
effect of severing opercularis muscle on body orientation. 768
effect of surfactants on salicylic acid solution absorption. 8777
effect of venom on NMJ. 3515, 3516
eggs, polysaccharides. 2859
enzyme characterization, eggs. 5111
eye development, temperature effects. 2858
fate of thyroxin iodine during metamorphosis. 7172
fractionation of sodium efflux in sartorius muscle. 7179
haematology. 3510
haploid cultured cell lines. 5114
heritability of linear body measurements and their ratios. 769
hierarchy feeding behaviour. 8776
histamine. 1905
hybrid, *Bufo americanus*. 6215
hyperparasitism. 5908
iodine accumulation. 7173
isozymes of pyruvate kinase in tissues and eggs. 6262
lamellar membrane around viruses, erythrocytes. 7986
larva, melanogenesis. 4233
local metamorphic action of thyroxine analogues. 6255
melanoid variant. 3512
migration and gene dispersal. 6253
morphology, histochemistry, oviduct and egg-jelly layers. 8770
multiplication of Golgi bodies in oocytes. 5109
Na-K-ATPase, epidermis. 3514
new membrane production during egg cleavage. 2075
nitrous acid effect on embryology. 8772
oocytes cytodifferentiation. 4238
origin and growth, cortical granules, oocytes. 5110
ossification. 2857
PCDV infection. 8774
pentose phosphate cycle enzymes. 2062
pigment polymorphism, blood serum variation. 8775
RNA synthesis. 3519
skin graft. 2063
transmitter effects, neuromuscular junction. 8771
tyrosine oxidase isolation. 4236
ultrastructure and function of developing retina. 4239
ultrastructure of interphalangeal area. 6259
- Rana ridibunda**, 5615, 7157, 7299
action of glucose and regulating hormones, brain activity. 7990
influence of thyroid extract on adrenalin metabolic action. 8769
karyology. 7991
quantitative analysis, slow component of delay rectification, atrium. 6238
Salmonella. 1815
- Rana temporaria**, 6202
aging. 7182
antibody formation. 7996, 7997
circular dichroism of rod outer segments suspension. 5119
dark spot receptors, role in feeding behaviour. 8798

- Rana temporaria**, *contd.*,
 desensitization to ACh, muscles. 7185
 digital anomalies. 7181
 effect of aldosterone on sodium transport and water flux, ventral skin. 7994
 effect of interrenals on carbohydrate metabolism. 5116
 effect of lissamine green on sodium transport. 5118
 electrical properties of slow muscles. 7184
 larvae, DDT effects. 7455
 metabolism. 5117
 muscle forces. 5121
 population ecology. 306
 sodium transport in isolated gastric mucosa during hypoxia. 7993
 visual pigments and ganglion cell activity in retinae. 308
- Rana temporaria temporaria**, body size. 305
- Rana tigrina**,
 development. 6264
 esterase histochemistry, kidney. 6263
 glucuronidase, alimentary canal. 5123
 glucuronidase in liver during growth. 5122
 histoenzymology of kidney glucuronidase. 8779
 host to *Diplodiscus lali* sp. n. 1865
 seasonal variations in summer cells of adrenal organs. 4237
- Rana virgatipes**, distribution, Florida. 7998
- Ranatra galantae** sp. n. 7003
- Ranatra linearis**, catching method during ontogenesis. 1961
- Rancidity**,
 effect of haematin compounds, fish scallops and lobster. 1735
 effect on feeding, *Seriola quinqueradiata*. 5414
- Raniceps raninus**. 5164
- Rangia cuneata**,
 distribution, east coast America. 4161
 effect of O₂ on end-products of glycolysis. 2017
 enzymes catalyzing succinate production. 2016
- Ranunculus**. 4792
- Ranunculus flabellaris**, effects of CO₂ on growth and development. 1133
- Ranzanides sagittarius**. 3965
- Raorhynchus terebra**. 3954
- Rapana**. 7857
- Rapana venosa**, nomenclature. 1999
- Raphidascaris acus**, development. 5934
- Raspailia**. 4824, 6884
- Rastrelliger kanagurta**,
 larvae, India. 8181
 parasitism by *Bomolochus jonesi* sp. n. 3990
- Rathkea octopunctata**,
 Barents Sea. 3331
 structural features of mass aggregation. 4847
- Reclamation**,
 saline and brackish waters. 1731
 saline soils. 1730
- Receptors**,
 adrenotropic β -, frog. 2876
 innervation, *Homarus gammarus*. 7773
 sensory, marine invertebrates. 1826
- Receptor organs**,
 electroreceptor of *Eigenmannia*. 4366
 small pit organ, *Parasilurus asotus*, ultrastructure. 4379
- Recording equipment**, physical factors, sea water. 5598
- Recovery**, hot spring community. 1752
- Recruitment**, *Chelonia mydas*, Costa Rica. 8013
- Red Sea**,
 boring Mollusca. 2799
 commercial fish. 341
 Cypraeidae. 2749
 milleporine corals. 123
- Redox potential**, effect on peat-bog, plants. 2562
- Reesia amoeboides**, isolated from *Lemna minor*. 2555
- Reflectivity**,
Hydrolagus collei. 5211
 organization of substances in scales, Pisces. 7236
- Refractive granules**, *Cryptobia salmositica*. 617
- Regalecus glesne**,
 female, Cape Province. 3700
 Mediterranean. 5471
- Regeneration**,
 Amphibia. 6272
 anal fin, *Poecilia reticulata*. 6583
 bottom fauna fish ponds. 3727
Carassius auratus. 8130
 cell capacities, regenerating limb, salamander. 8740
 cells, epithelial, *Carassius auratus*. 6445
 cephalic and caudal; dedifferentiation in *Syllis amica*. 659
 cilia, inhibition in *Stentor*. 626
 cirri, *Nereis diversicolor*. 6930
 complete Hydra from isolated epidermal explants. 5873
 coral reefs in light. 4842
 cornea externa, *Limnea stagnalis*. 5005
 denervated limbs, *Ambystoma* larvae. 6207
 DNA synthesis in nuclei, *Tetrahymena*. 7653
Dugesia dorotocephala. 7681
 effect of AC field frequency on axis of *Dugesia*. 643
 effect of actinomycin D, *Dugesia tigrina*. 5898
 effect of antimetabolites and morphostatic substances, *Hydra vulgaris*. 121
 electric organ, *Gymnotus carapo*. 8963
 gut and nerve-cord interaction in *Sabella* and *Branchioma*. 657
 hypoxia effects, *Chlamydomonas*. 8337
 irradiation effects, *Siredon mexicanum*. 8781
 jaw, *Triturus viridescens*. 2861
 limb, neurotrophic control, protein synthesis, *Triturus*. 4245
 limb muscles, *Siredon mexicanum*. 8780
Microcyclops minutus. 8546
 morphology of neoblasts, *Planaria*. 8485
 muscles, Amphibia. 8731
 nerve relation, Amphibia. 8739
 olfactory fibres, *Carassius auratus*. 8950
 optic tectum nerve fibres, *Carassius auratus*. 8939
 pharynx, *Planaria*. 4852
 Protopterus spp. 6584
 silverline system, Ciliata. 6832
 tail, *Dugesia lugubris*. 4858
 telencephalon, *Rana esculenta*. 5104
 test, *Discorhis*. 98
 thymidine kinase activity, *Dugesia dorotocephala*. 5899
 tissues, ultrastructure of *Syllis amica*. 145
 trichocyst distribution, *Urostyla cristata*. 7652
 Tubularia in electric field. 8477, 8478
 urodele eyes, acid phosphatase. 2851, 2852
Veretillum cymomorium. 2583
- Reinhardtius hippoglossoides**,
 ambivalent behaviour. 7417
 biology and exploitation, Greenland. 2333

- Reinhardtius hippoglossoides**, contd.,
eggs and larvae, distribution, 1638
length-weight relationship, 5474
Norwegian Sea, 3045
population estimates, Barents Sea, 5473
- Rejuvenation of plants**, arthrobranch of *Pacifastacus leniusculus*, 6036
- Relation**, between wet formalin weight and copepods and body length, 1891
- Relative growth**, Chlorococcales, influence brackish water, 3236
- Relict fauna**, Bivalvia, Baltic Sea, 8670
- Remispora**, 6815
- Remora remora**, feeding behaviour on parasitic copepods, 7418
- Remora osteochir**, 7418
- Reniera indistincta**, 3904
- Reniera simplex**, 3904
- Reniera viscosa**, 3904
- Reniera viscosa similis f. n.**, 3903, 3904
- Renilla**, light emission upon calcium addition, 5878
- Renilla reniformis**,
conversion of luciferin to luciferyl sulphate, 6895
proteases, 1850
- Renocera**, feeding behaviour, Bivalvia, 7017
- Reophax cylindricus**, 6834
- Reophax lodderae**, 3897
- Reports**, Board of Management, Malaysia, 5417
- Reproduction**,
Acipenser, Volgograd power station, 9019
Acrochaetium pectinatum, in culture, 1791
Actinia equina, 2579
activity of pituitary cells, Poecilia, 9041
Alestes macrophthalmus, 863
amphibians, Transvaal highveld, 287
annual cycle, *Donax cuneatus*, Madras coast, 4149
annual rhythm, *Orconectes pellucidus*, 4952
Apistogramma agassizi, 3023
aquaculture, Acipenser, Caspian Sea, 9020
aquaculture, Copepoda, 5957
aquaculture, fish, Europe and Africa, 3557
Archaphanostoma agile, 2594
Artemia salina, 7714
artificial spawning, hormones-induced, *Centropomus striatus melanus*, 7351
Asellopsis intermedia, 2629
asexual, Acrosiphonia, Iceland, 3227
asexual, *Amaroucium yamazii*, 5063
asexual, budding, Hydromedusae, 3328
asexual, clone testing, *Scenedesmus*, 3244
asexual, *Closterium littorale*, 8353
asexual, cortical anatomy of *Stylonchia notophore* during binary fission, 5851
asexual, effects of high carbon dioxide content on autospore release, *Chlorella*, 8343
asexual, effect of streptomycin on plastids, *Euglena*, 5758
asexual, fruiting, algae, India, 8278
asexual, *Goniodoma*, 3287
asexual, green and aposymbiotic hydra, effect of light, 638
asexual, *Nais pseudoobtusata*, 3966
asexual, parthenogenesis, *Atractolytocestus huronensis*, 5885
asexual, parthenogenesis, *Helophorus orientalis*, 6079
asexual, stalk division, *Acetabularia mediterranea*, 4641
asexual, strobila formation, *Wardium amphitricha* comb. n., Baltic and Okhotsk Seas, 8514
asexual, unique method in *Goniophora*, 636
Asterias rubens, White, Barents, Norwegian and European Seas, 2037
atypical division, *Colpidium kleinii*, 6839
autogamy in *Paramecium caudatum* ex-autogamont stages, 103
behaviour, *Gasterosteus wheatlandi*, 928
behaviour, *Phyllomedusa* spp., Mexico, 7163
behaviour, *Puntius titteya*, 5344
Branta canadensis, Alberta, 6301
breeding colonies, *Stictocarpa punctatus*, New Zealand, 8828
brood protection, *Bullia melanoides*, 7034
Bursatella leachii pleii, 2744
Carassius auratus, 5324
Carassius carassius, Danube, 398
Centrarchidae, 8159
Chlamydobotrys, 1041
Chlamydomonas geitleri sp. n., 8333
Chlamys islandica, 5016
Chlorella vulgaris, 6764
Chordaria flagelliformis, 2529
Clupea harengus, fecundity, Iceland, 5374
conjugation in *Spirostomum ambiguum*, 109
Coregonus lavaretus, Haweswater and Ullswater, 5266
courting behaviour, *Katsuwonus pelamis*, 7376
courting behaviour, *Tilapia melanotheron*, 3671
Crangon crangon, 184
cyclomorphosis, *Daphnia galeata*, Oregon, 7719
Daphnia, Arctic pool, 667
Dasyatis centroura, 352
decay of γ -particles in germinating zoospores of *Blastocladia emersonii*, 3861
Demospongiae, 6872
Dosidicus gigas, 5033
Dugesia, Brazil, 6901
Echinodermata, 8699
effect of progesterone on embryos, *Nectophrynoides occidentalis*, 5092
effect of thermal pollution, Columbia River, 5280
egg-laying, *Pacifastacus trowbridgii*, 7792
Epistylis galea, 6848
Eupleura, *Urosalpinx*, 8654
extra-marsupial development of eggs, *Typhlotanais magnificus*, 6994
fecundity, *Gadus morhua*, Iceland, 5374
fecundity, *Roccus americanus*, 5407
fertilization, *Jasus lalandii*, 4938
fertilization mechanism, *Palinuridae*, 6981
fruiting season of *Caulerpa freycinetii* var. *typica* f. *lata* in Singapore, 2522
fruiting season of *Caulerpa okamura*, 2521
fruiting season of *Caulerpa scalpelliformis* var. *denticulata*, 2520
gametogenesis of *Podocoryne carnea*, 3934
Gammarus lacustris, 2645
gestation, *Centroscyllium crepidator* biochemistry, 5209
gestation maintenance, *Nectophrynoides occidentalis*, Africa, 5091
Glossiphoniidae, 6924
Gobius cobitis, Brittany Coast, 7358
growth of *Euglena* during division cycle, 2539
heterogonic Rotatoria, 649
histology, *Spisula sachalinensis*, 7895
Hirundichthys affinis, 931
Homarus, serum protein changes during, 690

Reproduction, contd.,

- hormonal and nutritional control, *Rana cyanophlyctis*. 316
- hormonal release of parturition, *Hippocampus*. 9034
- hormone control, Decapoda. 6957
- hybrids, *Bufo* spp. 6218
- hybrids, *Larus* spp. 8824
- Hymeniacidon perleve*, Hampshire. 8463
- induction and development of cells, *Volvox rousseletii*. 6780
- influence of temperature and photoperiod on ovarian maturation and egg laying in *Orconectes*. 1267
- inhibition by copper, *Chlorella*. 6755
- inhibition, *Euglena gracilis*. 6799
- Inia geoffrensis*, America. 5158
- invertebrates, Arctic. 9073
- Ischnura elegans*. 712
- Jasus lalandii*. 193
- Kentrosphaera borzi*. 6767
- Lepomis macrochirus*. 2282
- life cycle of Rhodophyceae. 2542
- Lymnaea stagnalis*. 232
- Macrobrachium lanceifrons*. 2653
- Macrobrachium rosenbergii*. 2650
- Macropodus opercularis*. 8994
- Macrostomum romanicum*. 2596
- mating behaviour, *Melichthys niger*. 5455
- maturation and spawning of *Johnius dussumieri*. 896
- Melanogrammus aeglefinus*, fecundity, Iceland. 5374
- Micropterus dolomieu*, Ontario. 8177
- mitotic apparatus, amoebae. 4804
- Mugil*, endocrinology. 3042
- multiple spawning, fecundity, gonads, Sebastodes. 6525
- Mytilus edulis*, exposed rocky shores. 6146
- Nereis diversicolor*, endocrine activity. 3968
- nuclear, *Gyrodinium cohnii*. 1806
- obtaining precisely timed inseminations in *Poecilia*. 943
- on migration, *Gammaris zaddachi*. 1910
- Oncorhynchus nerka*, Alaska. 6413
- Ostrea edulis*, Lim Channel. 4157
- Paralithodes camtschatica*, effects of delayed mating. 2660
- Paromalostomum*. 128
- Pasiphaea multidentata*. 699
- Peloscolex inflatus*, Lake Baikal. 6931
- Penaeus duorarum*. 2668
- Perca*, *Leuciscus*, Baykalian Lake. 8997
- periodicity in algae. 3834
- periodicity in echinoids. 277
- Phocoena phocoena*, North Atlantic. 8829
- pollination, Lemnaceae. 7598
- Polydora* spp. 2616
- Pontogammarus robustoides*. 4076
- productivity, Diatomaceae. 5672
- protein metabolism and *Paratelpusa hydrodromous*. 4067
- Psammecinus miliaris*. 2829
- Pseudobryopsis myura*. 607
- Pungitius pungitius*, Ontario. 5470
- relation to land use and water levels, USA. 8818
- repression effects, *Carassius auratus*. 5323
- reproductive stasis, *Asellus aquaticus*. 4912
- Rhizosolenia hebeta*. 2499
- sand microfauna. 3126
- Saprolegniaceae. 6818

- seasonal variations in *Cyathura carinata*. 1908
- Sebastes mentella*, North Atlantic. 9002
- settling rates, *dinoflagellata*. 4745
- sexual. 6115
- sexual, *Agonus cataphractus*. 4397
- sexual, artificial propagation, *Meretrix lamarckii*. 7886
- sexual, *Cassis madagascariensis*, South Florida. 3441
- sexual, *Caulerpa*, Oki Islands. 3229
- sexual, *Chaetosphaeridium globosum*. 4643
- sexual, *Chelonia*. 8012
- sexual, clonal, *Chlamydomonas* spp. n. 8338
- sexual, conjugation, *Stylonychia mytilus*. 7646
- sexual, copulation, *Dendrocoelopsis ezensis*. 4856
- sexual, copulatory cue, *Leuresthes tenuis*. 4462
- sexual, *Cryptomonas*, *Chlorogonium*. 5757
- sexual, density dependent factors, *Lymnaea stagnalis*. 8658
- sexual, effect of concanavalin A on mating-type reaction, *Chlamydomonas*. 8332
- sexual, effect of light and temperature, *Dugesia tigrina*. 8499
- sexual, egg capsules, *Raja garmani*. 4298
- sexual, egg polarity, *Fucales*. 3255
- sexual, fecundity, *Alburnus alburnus*, British Isles. 4381
- sexual, fecundity, *Rutilus rutilus*, British Isles. 4381
- sexual forms, *Gonionemus vertens*. 6892
- sexual, fruiting, India, algae. 8278
- sexual, gametogenesis, *Planaria*. 8486
- sexual, genetics, *Rotatoria*. 3342
- sexual, *Glossogobius olivaceus*. 8170
- sexual, hermaphrodites, *Certonardoa semiregularis*. 3498
- sexual, hydromedusae, Barents Sea. 3331
- sexual, influence on young of X-irradiation of parents, *Lebistes reticulatus*. 8207
- sexual, lipid levels, *Leiognathus splendens*. 4411
- sexual, maturity and fecundity, *Pseudolithus elongatus*. 4426
- sexual, *Meda fulgida*, Arizona. 4376
- sexual, *Noctiluca miliaris*. 8400
- sexual, *Oncorhynchus gorbuscha* spawning grounds, Alaska. 8097
- sexual, *Otolithoides brunneus*, India. 4421
- sexual, *Paramacium bursaria*, heterocaryon. 4815
- sexual, *Phoca vitulina*, British Columbia. 3548
- sexual, Polychaeta, Pacific. 4870
- sexual, polychaetes, Biscayne Bay. 3347
- sexual polyps, *Hydractinia echinata*. 6894
- sexual, roe colour, environmental determination, *Myxoccephalus quadricornis*. 4418
- sexual, seasonal activities in male reproductive systems, *Heteropneustes fossilis*. 4369
- sexual, spawning behaviour, *Perca flavescens*. 3667
- sexual, spawning ground efficiency, *Leuciscus*, *Rutilus*, *Abramis*. 7333
- sexual, spawning, *Pseudolithus*. 4426
- sexual, spermiogenesis, ultrastructure, *Oligocottus maculosus*. 4420
- sexual, sporulation, *Minchinia costalis*. 5840
- sexual, *Triticella koreni*. 2842
- spawning behaviour, *Catla*, *Labeo*, *Cirrhina*. 6450
- spawning behaviour, *Lutjanus synagris*. 5398
- spawning, *Elysia viridis*. 7039
- spawning, *Gadus morhua*, Bornholm Basin. 5375
- spawning grounds, Tehema-Colusa Canal. 5278

Reproduction, contd.,

- spawning, *Limanda herzensteini*, Japan. 7400
 spawning of teleosts in Gulf of Gascony. 817
 spawning populations, *Oncorhynchus nerka*, Alaska. 6416
 spawning, *Theragra chalcogramma*, Bering Sea. 8979
 spawning, *Thunnus alalunga*, Hawaii. 6541
 spore liberation and germination, *Gloiopeltis*, Japan. 4711
Sterna albifrons, Alameda and San Mateo. 7208
Striaria attenuata, France and Sweden. 5736
 strobilation in *Cassiopea andromeda*. 3918
 swarming, *Platynereis*, Arcachon Bay. 7709
 teleosts, endocrine control. 2953
 Tilapia, France. 3674
 Tilapia, Madagascar. 2296
 Tisbe furcata in culture. 1888
 twin fetuses, *Stenella caeruleoalba*. 8833
 unusual aspects of sexual behaviour in *Rana a. aurora*. 304
Venus mercenaria, Mediterranean. 4168
Volvox carteri f. nagariensis. 6779
Zonaria farlowii, cytology and ultrastructure. 1790
 zoospore discharge, *Thraustochytrium kinnei*. 7590
 zoosporogenesis, *Radiosphaera negevensis*. 8366
- Reproductive organs,**
 alkyl glyceryl ethers biosynthesis, *Asterias forbesi*. 5044
Amphiura chiajei. 8703
 anatomy, *Sardinella longiceps*. 8115
 carbohydrate formation, *Nereis pelagica*. 4875
 Centrarchidae. 8159
 change in weight, *Salmo trutta*. 8926
 choanocytic origin of male germplasm, *Aplysilla rosea*. 5857
 conchospores of *Porphyra seriata*. 2547
 corpora atretica, *Bufo stomaticus*. 6222
 development, Istiophoridae, Indian Ocean. 3660
 extraction of toxins from roe, *Stichaeus grigorjewi*. 9003
 germinal cells, *Anura*. 7144
 germinal potentialities, *Asterina gibbosa*. 5045
 gill deformity, *Etheostoma olmstedii*. 7356
 Golgi apparatus in tetraspores of *Griffithsia*. 2541
 gonad cells, *Poecilia*. 9040
 gonadectomy, *Oncorhynchus nerka*. 4330
 grafting, *Asterina gibbosa*. 7915
 histology, *Spisula sachalinensis*. 7896
 innervation, *Asterina gibbosa*. 7110
 in vitro culture of testis cord, *Triturus pyrrhogaster*. 7199
 influence of day length and temperature on development, *Gasterosteus aculeatus*. 6561
 Lampetra. 5196
 male of *Gracilaria* spp. 2540
 male of *Octopus dofleini martini*, Pacific. 6158
 microtubules in telotrophic ovarioles, *Notonecta*. 4991
Mugil capito ovaries, steroid analysis. 6570
Oncomelania minima. 1993
 oocytes, growth of cortical granules, *Rana pipiens*. 5110
 oocytes, multiplication of Golgi bodies, *Rana pipiens*. 5109
 organotypic culture, larvae, *Bufo bufo*. 5079
 ovaries, fibrous and cystic lesions, *Gadus morhua*. 4389
 ovaries, lipostichaerin isolation, *Blennius* sp. 8982
 ovary cells, LY-1 infection, *Salmo gairdneri*. 8105
 ovary, response to pituitary extracts, *Poecilia reticulata*. 1647
 oviduct, effect of castration, *Rana esculenta*. 5106
 oviduct, enzymes. 5127
Poecilia reticulata, effects of hypophysectomy. 1634
Pseudogloiophloea okamurai. 1085
 Sebastodes. 6525
 seminal vesicles of oestrogen, *Heteropneustes fossilis*. 5338
 spermatogonial exchange, *Lebistes reticulatus*. 4458
 spermohistogenesis in vas deferens, Ostracoda. 7813
 stamens of *Victoria amazonica*, morphology of vascular bundles. 3873
 structure and function, *Aplysia* spp. 3436
 taxonomy, Corallina, Jania, Haliptylon. 4710
 testes, compensatory hypertrophy, *Bufo melanostictus*. 8752
 testes cord cultivation in vitro, *Triturus pyrrhogaster*. 8785
 testes, histology, *Tilapia nigra*. 9005
 tetraspores of *Dictyopteris* and *Pachydictyon*. 2545
 Toxoglossa. 233
- Reptantea**, New Zealand. 8563
- Reptilia**, 5531, 8086
 check list, Pinnacles National Monument and Bear Valley, San Benito and Monterey Counties, Calif. 286
 Cuba. 7147
 ecology, Venice Lagoon. 4213
 evolution. 8006
 hearing. 6293
 morphology and biophysical identification, fibrous proteins, epidermis. 8005
 orbital gland of emydine turtles. 327
 southeast Asia. 7943
 taxonomy and distribution, Afghanistan. 5067
 taxonomy, evolution, ecology. 8804
 type specimens, Macleay Museum, Sydney. 4212
- Research**, marine fish cultivation, Japan. 6330
- Reserpine**, effect on pituitary gland, *Clarias batrachus*. 5329
- Reservoirs**,
 artificial destratification. 3108
 benthic ecology, Ontario. 7819
 distribution of plankton. 954
 effects of drainage. 1684
 eggs spawned on artificial weed. 7317
 evaluation of water quality. 3150
 fish-industrial utilization, Kirovograd, USSR. 8866
Hexagenia limbata, California. 6082
 macro-invertebrates. 3083
 population studies, Berenplaat. 6616
 primary productivity, USA. 6607
 spawning ground of *Leuciscus, Rutilus, Abramis*, USSR. 7333
 Tekanpur, India, carp breeding. 3003
- Resistance**,
 calcium, Desmidiaceae. 4618
Crassostrea virginica, *Minchinia nelsoni*. 3461
- Resonance techniques**, *Chlamydomonas reinhardtii*. 4651
- Resource development**,
 mariculture, Gulf and Caribbean regions. 6040
Opisthonema oglinum fishery, Florida. 5286
 UAR. 5607
- Resource exploitation**, *Plesionika ensis*, Arabian Sea. 7801

Resources, mussel, Tennessee River. 4153

Respiration,

aerial breathing, effects on metabolism, *Lepisosteus*. 8208

aerial respiration, *Pantodon buchholzi*. 5287

aerobic, changes, *Padina aëborens* spore formations. 3262

aerobic, *Chelys fimbriata*. 8808

aerobic, comparison, Pisces. 3554

aerobic, Cyanophyceae. 7490

aerobic, heme-heme interaction in haemoglobin, lamprey. 8061

aerobic, oxygen consumption, temperate and tropical benthic fish. 8192

aerobic, oxygen fixation by blood, *Arenicola marina*. 3434

aerobic, physical gill, Insecta. 8607

aerobic, sperm *Hyriopsis schlegelii*. 8674

aerobic, Unionidae, Danube. 8684

aerobic, use of first gill slits for water intake, *Heterodontus portjacksoni*. 7257

aerobic, ventilatory movements, *Zygoptera*. 3420

anaerobic, algal cultivation. 3197

anaerobic, Cyanophyceae. 7490

anaerobic, terminal oxidation pathway, *Ankistrodesmus*. 3226

annual, animal populations. 3077

apparatus for continuous measurement in marine organisms. 1008

Asellopsis intermedia. 2629

bacterial uptake of organic substrate. 3293

Bathyporeia. 5996

blue light-enhanced, *Chlorella*. 3233

Chelydra serpentina. 778

Chironomus strenzkei. 4986

chloroplasts of *Acetabularia mediterranea*. 547

corrections for bacterial uptake of dissolved organic compounds in natural waters. 1098

Cyanophyceae. 12

damaged gills, *Salmo gairdneri*. 5298

Dermocystidium sp. 602

Echiurus echiurus. 2610

effect of hypoxia, *Scyllorhinus stellaris*. 8883

effect of shock in *Tetrahymena*. 1159

effect of starvation, *Thais lamellosa*. 6126

endogenous light-on rhythm, *Lemna gibba*. 7604
energetics of *Trichoptera* in relation to water flow. 4106

energy cost of gill ventilation, Teleostei. 8210

enzymes, thermal composition in *Carassius*. 865

Lylais hamata. 4993

frog. 6240

gas transport of blood of gill- and lungbreathing forms of *Ambystoma*. 292

glucose fermentation, *Chlorella*. 7512

haemoglobin-free, *Chaenocephalus aceratus*. 7352

haemoglobin-less, *Chaenocephalus aceratus*, Antarctica. 8166

inhibitors, frond and flower production, *Lemna gibba*. 6824

Lagodon rhomboides, Texas. 4409

Manicna, *Montastrea*, *Porites*, Florida. 5874

metabolisms, *Lemna gibba*, constant illumination. 6825

O₂ consumption in *Tilapia*. 912

Orcinus Orca. 334

oxygen consumption, larvae, *Ichthyomyzon hubbsi*. 8062

oxygen level in blood, Pisces. 8890

photophosphorylation inhibitors, *Chlorella pyrenoidosa*. 6762

photosynthetic, Cyanophyceae. 1751

polarographic respirometry. 3169

power function, fish. 3175

Protopterus aethiopicus. 1636

rate in *Euglena gracilis*. 3844

rate, microflora. 4750

rate, microflora in glass vessels. 8402

respiratory sensory system in decapods. 206

respiratory sites in *Nostoc sphaericum*. 3798

respirometer for studies of aerial and aquatic oxygen consumption. 2456

response to fluoride and copper ions in *Chlorella vulgaris*. 1061

sea urchin eggs, fertilized. 5055

Sphaeroma walkeri, effects of exposure. 4088

survival aptitude, *Lampetra fluviatilis*. 7252

swim-bladders, *Polypterus senegalus*. 3698

temperature effects, *Salmo gairdneri*. 3621

yawning reflex, Teleostei. 8980

zooplankton. 3066

Respiratory organs,

Acentropus niveus, Poland. 4981

anal papillae, *Culex pipiens*. 4984

Chaenichthys rugosus. 5391

chitin in gill bars, *Branchiostoma floridae*. 6198

energy cost of gill ventilation, Teleostei. 8210

gill cell ultrastructure, *Helostoma temminckii*. 8172

gills, ATPase, Salmonidae. 7276

gills, influence of acclimation temperature on lipid composition of mitochondria, *Carassius auratus*. 7301

gills, Insecta. 8607

gills, parasites. 6812

gills, use for water intake, *Heterodontus portjacksoni*. 7257

gills, water flow *Heterodontus portjacksoni*. 7256
hypobranchial apparatus, *Engraulidae*, *Chirocentridae*. 6395

metabolism, *Paralithodes*. 6038

Pantodon buchholzi. 5287

ultimobranchial body, *Salmo salar*. 6433

water flow *Carcinus*. 684

Retinella. 7019

Reviews, marine yeasts. 1818

Rhabdamia. 8985

Rhabditida. 7690

Rhabditis anomala. 3948

Rhabditis (Uniovaria) cranganorensis subgen. et sp. n., India. 6916

Rhabditis ocypodis. 7690

Rhabdoblennius cornifer. 8163

Rhabdolaiminae. 7689

Rhabdopleura compacta, taxonomy and ecology. 2845

Rhabdosphaera stylifera. 3812

Rhacophorus goudoti. 3509

Rhacochilus toxotes. 5389

Rhacochilus vacca. 5389

Rhamnocercus bairdiella. 5881

Rhaptapagis cantacuzenei gen. et sp. n., (Microhydrulidae. 5875

Rhechias armiger, taxonomy, Hawaii. 7421

Rhctogramma sherborni. 5163

Rhincalanus cornutus, trunk, musculature. 5978

Rhine River, *Scirpus* spp ecology. 3869

Rhinichthys, lactate dehydrogenases. 5345

Rhinichthys atratulus. 5345

food and feeding habits, Kentucky. 6479

- Rhinichthys cataractae*. 5345
- Rhinobatidae*. 8069
- Rhinoptera*, distribution, Georgia. 4295
- Rhinoptera bonasus*, parasitism by *Dioecotaenia cancellata* gen. et comb. n., Chesapeake Bay. 5895
- Rhinosardinia* spp. 8083
- Rhipidiphylon cladophoroides*, new marine alga, Hawaii. 46
- Rhipidistia*, homology, skull. 3037
- Rhithrogena hercynia* sp. n., Czechoslovakia. 2715
- Rhithropanopeus*. 4936
- Rhithropanopeus harrisi*, 5945
- androgen organs, ultrastructure. 4082
- colour preferences. 6991
- ecology, Weichsel delta. 4970
- laboratory culture of larvae. 4971
- nutritional effects of *Artemia* from different locations on larval development. 5945
- pigment chromatography, Gdansk. 8603
- Rhithropanopeus harrisi trendatus*, effect of $HgNO_3$. 2644
- Rhizidium tomiyamanum*, Japan. 3306
- Rhizocephala*,
- distribution, California. 4021
- distribution, Iranian Gulf and Gulf of Oman. 4015
- kariology and systematics. 175
- Red Sea. 4022
- twin species. 1895
- Rhizosolenia styliiformis*, distribution, North Atlantic, North Sea. 8321
- Rhizoids*,
- Fucus* egg, de novo formation of cell wall. 2533
- morphology, *Polysiphonia lanosa*. 4716
- produced by *Fucus* eggs. 2531
- Rhizophyidium*. 7583
- Rhizophyidium acuforme*. 5800
- Rhizophyidium laterale*. 5800
- Rhizophyidium sphaerocarpum*, varieties. 7589
- Rhizopsammia minuta*, distribution, Japan. 8476
- Rhizosolenia hebata*, reproduction and taxonomy. 2499
- Rhizosolenia styliiformis*, relationship with *R. hebata*. 2499
- Rhizosphere*, of *Lemna*. 81
- Rhodella maculata* gen. et sp. n.,
- nutrition. 4724
- ultrastructure. 4724
- Rhodesia*,
- Lake Kariba, effective macrophytes on fauna. 2390
- Lake Kariba, *Tilapia* culture. 3031
- Lake Kariba, vascular hydrophytes. 2559
- Rhodobothrium pulvinatum*. 8483
- Rhodochorton purpureum*, life history in culture. 1803
- Rhodochorton tenue*, life history in culture. 1803
- Rhodoglossum minimum* sp. n. 6726
- Rhodolachne decussata* gen. et sp. n., (*Rhodophyceae*), Indian Ocean. 4725
- Rhodolachne melaceae*, taxonomy. 8388
- Rhodomelaceae decussata*. 8388
- Rhodomonas*. 5504
- Rhodomonas baltica*. 3720
- Rhodopeltis*, systematic anatomy and key. 3282
- Rhodophyceae*, 3790, 4579-4581, 4598, 5617, 5618
- chemistry, Mediterranean. 7535
- culture. 5746
- fixation of phycobiliproteins to photosynthetic membranes. 5751
- osmoregulation with *o*-galactosyl glycerides. 1026
- pigments. 5630
- primary production, Marshall Islands. 7534
- reproductive cycle. 2542
- studies on phycoerythrins. 1020
- systematics of *Corallinaceae*, gen. *Goniolithon*. 3841
- water-soluble pigments. 64
- Rhodophysema elegans*. 6725
- Rhodopseudomonas*. 5784
- Rhodopseudomonas capsulatus*, N_2 -fixation in mixed culture. 592
- Rhodopseudomonas palustris*, spectrofluorometry of pigments. 4760
- Rhodopseudomonas spheroides*,
- G6PD. 3846
- polarity of proton translocation. 591
- regulation of G6P synthesis in relation to culture conditions. 1077
- Rhodopsin*,
- frog retina. 2880
- photoproducts, frog retina. 2883
- Rhodospirillum rubrum*,
- polarity of proton translocation. 591
- uracil incorporation and photopigment synthesis. 74
- Rhodotheca*. 5784
- Rhodotorula glutinus*. 5798
- Rhodotorula rubra*. 5798
- Rhodymenia palmata*, variation in desmosterol content. 6793
- Rhomboidichthys podas*, colour change. 5224
- Rhopalosiphum nymphaeae*. 6827
- Rhyacotriton*. 8732
- Rhyacotriton olympicus*, *Ascapus truci*, food similarities. 4217
- Rhynchobatus djeddensis*. 7259
- Rhynchobdella aculeata*, functional anatomy of digestive organs. 6585, 6586
- Rhynchoidea*. 3881
- Rhynchotrema*. 7130
- Rhythms*,
- circa annual periodicity, *Lota lota*. 3016
- circadian, acoustic, *Leucaspius delineatus*. 6401
- diurnal, activity, *Anodonta cygnea*. 7067
- diurnal, emergence of *Panaeus duorarum*. 2685
- diurnal vertical migration in *Pseudoscatia* polyactis. 442
- Dreissena polymorpha*, adductor activity, feeding, digestion and excretion. 2008
- locomotory, *Orchestia* spp. 2658
- rhythmogenesis in nerve fibre, *Eriphia spinifrons*. 6015
- swimming rhythm of *Eurydice pulchra*. 4042
- Ribeiroia marina* comb. n., life history. 5915
- Ribosomes*,
- active hybrid 80s particles from subunits, *Tetrahymena pyriformis*. 111
- dissociation. 4799
- effect of pressure in *Tetrahymena*. 1147
- gastrulae of *Xenopus*. 773
- origins in *Amoeba proteus*. 1839
- sedimentation properties, *Crithidia oncopelti*. 4808
- separation, characterization, *Euglena gracilis*. 7554
- specific transfer factors, *Prototheca zopfii*. 4681
- Ribulose 1,5-diphosphate carboxylase*, *Chlorella*. 1775
- Ricinus* leaf extract, effect on algae. 1774
- Rissoa costata*. 8431
- Rissoidea*, anatomy and taxonomy, Japan. 1979
- Rita rita*, histochemistry and autoradiography, skin glands. 6480
- Ritteriella picteti*, distribution. 4210
- Rivers*,
- brown-water stream. 3107

- Rivers, contd.,**
hydrology and vegetation. 3103
- River Danube,**
Gyrodactylus luciopercae from fish. 1861
Protozoa. 2565
water quality. 3755
- Rivulogammarus,** distribution in running water, Baden-S Württemberg. 208
- Rivulus harti,** distribution, California. 7419
- Rivulus marmoratus,** 7389
distribution, Florida West coast. 4477
- RNA,**
activity, Paratelphusa hydrodromous. 4959
base sequence conservation, Echinodermata. 7912
DNA-associated, in Chlorella. 554
DNA hybrid. 4249
effect of UV on synthesis in amphibian lens. 323
embryos, Xenopus laevis. 6289
estimation by UV, trout and goldfish. 3172
Euglena gracilis. 4739
in fertilized and unfertilized eggs of Urechis. 1205
in neurons, Aplysia. 8651
in unfertilized eggs of Urechis. 1204
in various fish tissues. 816
localization in embryo, Engystomops pustulosus. 3507
micro-injection in amoebae. 1140
polymerase similarities, Tetrahymena, mammalian. 8456
precursors, Schistosoma-infected Biomphalaria glabrata. 6105
synthesis, Arbacia punctulata eggs. 8707
synthesis, Arbacia punctulata oocytes. 2032
synthesis, Rana pipiens. 3519
synthesis, sea urchin embryos. 5052
synthesis, Spirostomum. 8452
synthesis, Stylonychia notophora. 4819
synthesis, Xenopus embryos. 4250
transcription, Paracentrotus lividus. 5048
- mRNA,** availability, sea urchin embryos. 5047
- rRNA,**
precursor in Xenopus laevis. 2069
regulation of translation and transcription, embryonic development, Arbacia punctulata. 8705
synthesis, Paracentrotus lividus. 7918
transcription unit evolution. 8087
- tRNA,** induction by light, Euglena. 3286
- RNA polymerase,**
activity, embryology, Amphibia. 8735
synthesis during development, sea urchin. 6166
Tetrahymena, similarity with mammalian. 8456
- RNase,** 3847
Urechis caupo. 7711
- Robertsonia salsa.** 3732
- Robsonella australis.** 5927
- Roccus,** freezing of tissues. 6517
- Roccus americanus,**
change of parasites, fish in new habitats. 6518
fecundity. 5407
parasitism by Triaenophorus nodulosus, Lake Ontario. 6533
- Roccus chrysops,** open water orientation. 904
- Roccus saxatilis,**
Chesapeake Bay, lymphocystis disease. 8182
transportation. 905
- Roe,** polyunsaturated alcohols in wax esters of roe of Mugil and Trichogaster. 443
- Rogneda,** distribution, Marseilles area. 6908
- Romania,**
Black Sea, Cyanophyceae. 1747
cave-dwelling harpacticoid copepods. 160
Crapina-Jijila lake complex, algal flora. 3708
Crapina marsh, population studies of Union tumidus. 2020
Halacaridae. 1964
Hydraenidae. 1956
Lake Snagov, Pintaralia beklemichevi gen. et sp. n., calyptorhynchid relict. 1862
Nera River, Unio crassus population studies. 2019
new Odonata records. 711
Oltenia Province, Trichoptera. 1962
rivers, benthos. 2392
rivers, pollution. 2417
Scophthalmus maoticus. 2336
Secul Dam lake, phytoplankton. 2350
Zanoaga lake, hydrobiology. 2393
- Ross Sea,** Colossendeidae, Pycnogonidae, Endeidae, Ammotheidae. 1965
- Rotifera,** 4864, 4865, 5306, 6621, 7116, 7434
Budir, Snaefellsness, Iceland. 648
cultivation and nutrition, Hiddensee. 5930
genetics. 3342
peatbog, Romania. 8518
plankton. 6915
Finland. 2601
- Rubidium,**
direct determination from sea water. 5556
use as indicator for potassium, Elodea densa. 6821
- Rubulipora.** 3314
- Rubus chamaemorus.** 4777
- Rudarius ercodes.** 4744
- Rudilemboides.** 4533
- Rugoverticula mokurensis gen. et sp. n.,** (Isognomoniidae), Afghanistan. 7893
- Rumex.** 5711
- Runula rhinorhynchus,** distribution, Laccadive. 4303
- Runula tapeinosoma,** distribution, Laccadive. 4303
- Ruppia maritima,** temperature effects. 4778
- Rutilus,** 8145
fecundity, British Isles. 4381
- Rutilus rutilus,** 3946, 6836, 7333
formation of defensive reflexes, larvae. 8968
G6PD, genetics. 5346
growth and growth rate. 8967
host to Diplozoon paradoxum. 2589
- Rutilus rutilus heckeli,** viability of embryos depending on respiration intensity. 8969
- Rynkatorpa pawsoni sp. n.,** commensalism with Gigantactis macronema, California. 6180
- Rypticus bicolor.** 8041

S

- Sabanejewia.** 5330
- Sabella,** gut and nerve-cord interaction in regeneration. 657
- Sabellacheres (?) drachi sp. n.** 3973
- Sabellaria alveolata,** larval growth and settlement. 2618
- Sabellaria kaiparaensis,** feeding rate. 8537

- Sabellaria spinulosa**, 7532
 setting of larvae, 2619
- Sabellastarte longa**, thorium dioxide fate, 7710
- Saccharomyces**, 5798
- Saccoglossus horsti**, structure, nerve fibre layer and neurocord, 4211
- Saccorhiza**, 5734
- Saccorhiza polychaetes**,
 growth form and environment, 579
 influence of reduced salinity on distribution, 1065
- Saccus vasculosus**, circulatory system, 391
- Sacoides**, 7001
- Sadayoshia gen. n.**, (Galatheidae), Japan, 8557
- Sagartia troglodytes**, biology and morphology, 1851
- Sagitta bombayensis**, distribution, India, 4197
- Sagitta megalophthalma sp. n.**, 2839
- Sagitta robusta**, *Sagitta regularis*, taxonomy, 4197
- Sagitta serratodentata**, 9043
- St. Helena**, *Dyschiriognatha atlantica sp. n.*, 2731
- Saipanetta tumida**, anatomy, 7816
- Salamander**,
 biochemistry of alkaloids, 3530
 oocytes, 7201
 origin and differentiative capacities of cells, blastema, regenerating limb, 8740
 transepithelial potential differences, larvae and adults, 5073
- Salamandra maculosa**, inhibition of growth, fungi and bacteria by skin gland secretion, 6267
- Salamandra salamandra**, 6227
 electroretinogram, 7999
 ultrastructure and glycogen, interrenal gland, 324
- Salamandridae**, toxins from eggs, 6589
- Salicornia stricta**, neoteny, 4793
- Salicornia veneta sp. n.**, from Lagoon of Venice, 82
- Salicornia virginica**, 3865
- Salinity**,
 and pigments in *Porphyridium*, 1084
 and thermal tolerance in *Callinectes sapidus*, 1903
 Calanoidea in athalassic saline waters, 2632
 changes, behavioural response, *Leiostomus* and *Micropogon*, 897
 changes, effect on growth of *Monochrysis lutheri*, 3809
 changes, effect on respiratory metabolism of *Marionina*, 3962
 effect on amino acid composition of body fluid of *Sesarma plicatum*, 211
 effect on amino acids of *Phaeodactylum tricornutum*, 1767
 effect on current formation, equator, 6641
 effect on distribution of *Clymella torquata*, 2607
 effect on encystment in *Fabrea salina*, 618
 effect on heat tolerance in *Diogenes*, 688
 effect on postlarval penaeids, 2688
 effect on reproduction of *Nerilla antennata*, 3970
 effect on survival of *Oncorhynchus*, 845
Gasterosteus aculeatus f *trachurus*, deionized water, 5449
 influence on capacity of caesium fixation, *Physa acuta*, 3450
 Mytilus, larvae, 3469
 preference and tolerance in *Pomatoschistus microps*, 903
 recorder, 2450
 reduced, influence of distribution on *Chorda filum* and *Saccorhiza polychaetes*, 1065
 relation to oxygen consumption, *Tilapia nilotica*, 4434
 response by barnacles, 2639
 response to changes by *Artemia*, 2628
- Salinity tolerance**,
Anguilla anguilla, 6545, 7387
 benthos, Danube delta, 4520
 brackish pools, *Hyadesia fusca*, 7835
Bufo marinus, South Florida, 5081
Chlorococcales, 3236
Chrysophyceae, Natal, 3212
 cloacal and salt-gland excretion, *Larus glaucescens*, 3544
Ctenopharyngodon idella, 7313
Cyanophyceae, 3801
 Danube delta, 4516
 ectoparasites of *Gasterosteus* and *Pungitius*, 6562
 effect on growth, *Dasya pedicellata*, 5740
 effect on pituitary, *Mugil*, 9036
Elysia viridis, 6110, 7039
 embryos and larvae, *Mulinia lateralis*, 7889
Eupleura, *Urosalpinx*, 8654
Fundulus heteroclitus, 7393
 fungi, Yugoslavia, 7580
Lampetra, *Petromyzon*, 8064
Lepeophtheirus salmonis, 5973
Libinia emarginata, 8584
Ligia spp., 8585
Menippe mercenaria, 6030
Modiolus, 8675
Mya arenaria, free amino acid composition, 4154
Nereis diversicolor, 7705, 8534
Nereis diversicolor, Baltic Sea, 7707
 operant conditioning, *Salmo gairdneri*, 7283
Orconectes rusticus, 8589
Pacifastacus leniusculus, 8590
 prezoaea, *Cancer magister*, 6003
Puccinellia, 6828
Scutus breviculus, 8667
Siboglinum ekmani, 759
Sphaeriodiothrix compressa, 8323
Sphaeroma rugicauda, 4086
Taeniomembras microstomus, Australian salt lakes, 4478
Tilapia zilli, Suez Bay, 3677
 tolerance of distilled water, *Asterias*, *Gammarus*, *Gasterosteus*, 6169
 zooplankton, Hawaii, 9052
- Salmacina**, 3975
- Salmincola**, revision of genus, 4010
- Salminus**, osteology, 5335
- Salmo**, 8038
 activation of pituitary by bacterial toxins, 2982
 aquaculture, 8892
 aquaculture with *Cyprinus*, 3619
 ascorbic acid requirements, 2976
 catch statistics, 8894
 effect of tags, 3622
 feeding at night, 4344
 fishing industry, West Greenland, 8863
 food and feeding behaviour, 3625
 food of *Phalacrocorax carbo novaehollandiae* in Otago, 4255
 gas tension in tissues, 7284
 hybrids, 8893
 isolation and extraction of calcitonins, 8089
 mechanism of phosphorylation of phosphoproteins during oogenesis, 5311
 otolith punch, 3624
 relationships, 8927
 sea life, Baltic, 5290

Salmo, contd.,

- significance of enzymes in thermal acclimatization. 5309
- survival of larvae, Scotland. 6435
- ultrastructure, deoxyribonucleoproteins. 5312
- use of population numbers to estimate feed allowances. 6426
- Salmo aguabonita**, parasitism by *Crepidostomum farionis*, control. 5293
- Salmo clarki**,
 - growth and annuli of jaw-tagged specimens. 858
 - movements and homing. 379
- Salmo gairdneri**, 5228, 5306, 5388, 7285, 7452, 8081, 8087, 8870, 8922
 - absorption and retention of organic mercurials. 835
 - aflatoxicosis. 4328
 - altitudinal distribution, South Platte River, Colorado. 861
 - anaesthetization with MS-222. 7285
 - biosynthesis of nuclear proteins, larvae. 6428
 - body size variations. 5294
 - defects of supersaturation of nitrogen, Columbia River. 8919
 - determination of salinity preference by operant conditioning. 7283
 - digestive response to pellet diets. 847
 - discrimination between tones. 5282
 - diseases. 4333
 - DNA polymerase. 5295
 - effect of dietary sterculic acid on hepatic lipids. 8921
 - effect of Dylox on larvae. 982
 - effect of fin removal on stamina. 859
 - effect of limited food supply on growth. 378
 - egg electrophoretic analysis. 6430
 - embryology. 6452
 - enzyme activities. 8107
 - Eubothrium crassum parasites, vermifuge. 4335
 - feeding. 3601
 - fertilization of eggs with cryo-preserved sperm. 380
 - food chains, Castle Lake, California. 7295
 - glycerol kinase and glycerol utilization, liver. 7286
 - guiding, Oregon. 8870
 - in vitro transformation of steroids. 6429
 - influence of light on early development. 386
 - inorganic composition of gall-bladder bile. 860
 - IPN virus in pancreatic tissue. 855
 - light responses. 4339
 - lipolytic activity toward long-chain triglycerides in muscle. 849
 - LT-1 infection of ovaries. 8105
 - migration. 5223
 - migration through pipes. 6422
 - morphological and biochemical changes during development. 4337
 - nucleotide phosphodiesterase, brain. 3618
 - pleiotropic effects of golden colour gene. 7287
 - protamine kinase, purification and characterization. 4336
 - Pukinje cell inhibition. 5296
 - respiration and osmoregulation, damaged gills. 5298
 - S. mykiss*, chromatographic analysis of blood proteins. 8927
 - sodium uptake by isolated gills. 5297
 - survival increased by addition of molybdenum to lake, California. 7294
 - tagging. 8923
 - temperature effect on respiration. 3621
 - toxicity of aflatoxins. 8106
 - uptake of dieldrin by isolated gills. 981
 - weight loss as result of starvation. 5283
- Salmo gairdneri irideus**, 7267
 - saccus vasculosus. 391
- Salmo irideus**, 8084
 - leucocyte numbers. 818
 - olfactory organ. 811
 - phosvitins in roe. 5274
 - staining of argyrophil adenohypophyseal cells. 8924
- Salmo mykiss**, *S. gairdneri*, chromatographic analysis of blood proteins. 8927
- Salmo salar**, 6650, 8860
 - analysis of insecticides, Maine. 4342
 - changes in corpuscle of Stannius during migration. 8925
 - chromosomes and speciation, North Atlantic. 7289
 - control of *Saprolegnia* growth. 7291
 - dispersal of wild and hatchery-reared young. 850
 - distribution and characteristics, Newfoundland. 387
 - electron microscopy of normal head, comparative, ulcerative dermal necrosis. 7290
 - electrophoretic analysis of serum proteins. 5302
 - feeding of spermatozoa, improvement. 4341
 - landlocked, pugheadedness, Newfoundland. 4340
 - muscle damage when caught in nylon gillnets. 385
 - osmoregulation. 7288
 - population estimates, River Teify. 5305
 - population studies, Newfoundland. 383
 - returning for 5th and 6th consecutive spawning. 384
 - seasonal buoyancy changes. 851
 - ultimobranchial body histophysiology. 6433
 - water balance in eggs. 5301
 - x *Salmo trutta*, hybrid, chromatographic analysis. 8109
- Salmo trutta**, 3946, 5306, 6082, 6434, 7354, 8084, 8145, 8922
 - altitudinal distribution, South Platte River, Colorado. 861
 - changes in gonad weight and amount of fats, during 1 year. 8926
 - diel changes in feeding behaviour. 5307
 - population estimates, River Teify. 5305
 - radiation induced gynogenesis and androgenesis. 815
 - seasonal activity and feeding. 852
 - skin structure, larvae, Reda River. 7292
 - vitamin C and glucose metabolism, larvae. 8110
 - x *Salmo salar*, chromatographic analysis. 8109
- Salmo trutta f. fario**, 4380
- Salmo trutta labrax infrasp danubicus**, from the Danube, Bratislava. 389
- Salmo trutta oxianus**, 8861
- Salmo trutta trutta**, Pomeranian coastal rivers. 388
- Salmon**,
 - amino acid composition of calcitonin. 368
 - canned, key to identification scale characteristics. 370
 - DNA from liver. 367
 - effect of gonadotrophin on guppy. 467
 - radionuclides. 369
 - report of Research Trust, Ireland. 365
 - schooling behaviour. 366
 - swimming behaviour, Kamchatka peninsula. 5273
 - Tehema-Colusa Canal as spawning channel. 5278
- Salmon fishery**, Latvia. 5292
- Salmonella**, 5716, 7572
 - and fish. 1722
 - distribution, Germany. 3459
 - distribution, Gulf of Aarhus. 3300
 - ecology. 3142

- Salmonella, contd.,**
 estimates of contents in sewage and polluted seawater. 9092
 in fish meal. 799
 in sewage and polluted seawater. 1723, 1724
 isolated from *Rana ridibunda*. 1815
 isolation, surface water. 3141
 pollution, Gulf of Aarhus. 6683
 temperature tolerance. 7572
- Salmonidae, 7449**
 carrying capacity of hatcheries. 4312
 enzymes. 8090
 high mountain lakes. 2988
 hybrids, haemoglobin. 8922
 IPN virus, Canada. 5299
 keys to canned species using scale characteristics. 6402
 live egg sorting device. 5285
 migrations, Pacific. 5284
 phylogeny. 8091
 primary production in stream, Scotland. 5304
 rectangular circulating rearing pond. 6333
 temperature effect on reproduction and behaviour. 5280
 toxicity of tetrachloro-O-benzoquinone. 4331
 trout, relationship with benthos, Finnish lakes. 5306
 UDN disease, British Isles. 4343
- Salmoniformes, taxonomy. 3617**
- Salpa democratica Forsskal 1775, designated type-sp of Thalia. 761**
- Salpa fusiformis. 9043**
- Salpa G. Edwards 1771, suppressed. 761**
- Salpidae, distribution, West Africa. 4210**
- Salpingoeca spinifera sp. n., Arctic. 4747**
- Salpingoporella, taxonomy. 4673**
- Salt balance, saline loading, Natrix cyclopiion. 3540**
- Salt lakes,**
 energy transformations. 1687
 fauna, British Columbia. 3742
 temporal changes. 3122
 Washington, USA. 3123
- Salt marshes,**
 aquaculture, Mugil, new Dead Sea. 3569
 communities, effect of oil pollution. 1004
 communities, Foraminifera. 1141
 ecology of *Leptosphaeria discors*. 5803
 effect of oil pollution. 6690
 Harpacticoida, Germany. 4889
 nutrient changes during flooding. 977
 plants, productivity and nutrient values. 490
 vegetation transplantation, Georgetown, South Carolina. 3865
- Salvelinus,**
 hybrids, selection methods. 5303
 lactate dehydrogenase genetics. 8111
 lactate dehydrogenase isozymes. 8092
 lymphosarcoma of possible thymic origin. 4346
- Salvelinus alpinus,**
 marking, Svalbard. 2985
 relict fauna, Quebec. 3620
- Salvelinus fontinalis, 6650, 8922**
 age and growth, Maine. 7296
 altitudinal distribution, South Platte River, Colorado. 861
 aortic catheterization. 848
 detecting IPN virus by peritoneal washes and faecal examination. 381
 effects of low environmental pH on blood pH and sodium balance. 6436
 embryology. 6452
 eyes. 5203
 food chains, California. 7295
 growth in deuterium. 390
 host to *Capillaria salvelini*. 1185
 LDH polymorphism, transferrin loci. 8114
 macrocytic anaemia. 7293
 overwintering, Lawrence Creek, Wis. 382
 purines responsible for silvering. 813
 reflex inhibition by DDT. 8112
 soluble lens protein polymorphism. 856
 structural similarities, neurohypophyses, with tetrapods. 6437
 survival increased by addition of molybdenum to lake. 7294
 transferrins. 8113
 ultrastructure, blastoderm. 6438
 world distribution. 846
- Salvelinus leucomaenis, growth, South Sakhalin. 8858**
- Salvelinus namaycush,**
 feeding, Lake Tahoe. 3623
 long term effects of diet, Ontario. 4345
- Salvinia natans,**
 photoperiodicity. 5815
 promoting effect of CO on sporocarp formation. 4774
- Samplers,**
 benthic stream invertebrates. 2445
 drift sampler driven by waterwheels. 1948
 for dividing large samples of stream invertebrate drift. 1945
 horizontal water, stratified waters. 1734
 interface, using spring-actuated syringes. 1733
 stabilizing framework for Knudsen bottom sampler. 2452
 trawl-board, for sediment. 3165
 water sampling bottle. 1728
 water sampler, from beer keg. 2448
- Sampling,**
 bacteria and. 3166
 dredges. 9103
 effect on diel periodicity in invertebrate drift. 1949
 ocean floor. 1729
 sequential, population estimates, determination. 9107
 statistical methods, benthos, Germany. 7435
 substrate for macroinvertebrates, Klamath River, Oregon. 9079
 Tonolli mud-burrower. 3168
 winch. 3780
- Sand, biological composition of sediments, Gulf of Fos. 4541**
- Sandstone, Quebec. 2940**
- Sapphirina, ultrastructure of nauplius eye. 163**
- Saprochaete saccharophila, ultrastructure and taxonomy. 3307**
- Saprolegnia, 7584**
 growth control, *Salmo salar*. 7291
 growth on amino acids. 5805
- Saprolegnia ferax, distribution, Perca, Salmo, Lake Windermere. 6516**
- Saprolegnia parasitica, infecting Palaemonetes. 195**
- Saprolegniaceae,**
 Iceland. 7584
 reproduction. 6818
- Saprospira tovimiformis sp. n., New Zealand. 8416**
- Sarcinochoysis marina, culture. 2498**
- Sarda orientalis, distribution, Ceylon. 5409**
- Sardina pilchardus, gill raker studies. 2986**

- Sardinella**, 6371
 biometry and systematics, 4347
 fishery, Congo, 4348
- Sardinella longiceps**,
 morphological irregularities, 4349
 reproductive organ abnormalities, 8115
- Sardinella marquesensis**, biology, 8928
- Sardinella sirm**, morphometry, Okinawa, 4350
- Sardinella taiwanensis** sp. n., Indo-Pacific, 4347
- Sardinus erythrophthalmus**, 3946
- Sardinops**, 5188
- Sardinops caerulea**, 7243
- Sardinops melanosticta**, 8239
- Sardinops ocellata**, surface currents, Cape Agulhas, 4525
- Sardinops sagax**, 4522
- Sargassum**, 3790, 6781
 distribution, production, Carolina coast, 3261
 molluscs on Indo-Pacific, 2773
 variations in alginic acid content with growth, 8378
- Sarritor frenatus**, morphology, 8855
- Saxidomus nuttalli**, parasites, California, 3336
- Scabies crispata**, morphology, Thailand, 4150
- Scales**,
 dermal denticles, vertebrates, 6362
 false annulus formation, *Lepomis macrochirus*, 6501
 formation, *Pleurochrysis scherfelli*, 5681
Oncorhynchus, migration study, 3612
Oncorhynchus nerka, 6417
 reflecting surfaces, Pisces, 7236
 squamation chronology, *Pimephales promelas*, 5343
 taxonomy, *Oncorhynchus nerka*, 3613
- Scambicornus**, distribution, West Indies, 6951
- Scambicornus brachysetosus** sp. n., Gulf of Mannar, 4011
- Scandinavia**, Sphagnum ecology, 3870
- Scaphiopus**, 8732
- Scaphiopus holbrookii**, 7984
- Scaridae**, 7663
 east Pacific, 906
- Scarinae**, generic rearrangement, 906
- Scarus guacamaia**, determination of iodoamino acids in thyroid, 5410
- Scatella stagnalis**, 6612
- Scenedesmus**, 3354, 3739, 8300
 assimilation of amino acids, 6772
 culture, 5705
 culture, effect of fungal parasites, 1783
 effects of abscisic and salicylic acid on phosphate uptake, 5727
 hydrogen evolution, 4647
 life cycles, ontogeny of single cells, 4686
 light-dependent hydrogen evolution, 1782
 manufacture of beverages containing lactic acid bacilli, 4665
 mineral nutrition, 4688
 morphogenesis, trace elements and spine formation, 3243
 mutant, photosynthetic reaction centres, 4683
 outdoor cultivation, Bulgaria, 4691
 outdoor cultivation, Třeboň, 4690
 photoproduction of hydrogen by photosystem I, 5728
 photosynthetic mutants, 4682
 potential photosynthesis, 3241
 predicting light effects on growth and P uptake, 2507
 production of reticuloendothelial system stimulant, 5706
 selecting of clones, 3244
 sensitivity to *Amoebophilidium*, 47
 suburban ponds, Japan, 49
 surface properties and ion exchange, 8367
 temperature-induced morphological variability, 3242
- Scenedesmus dispar**, ultrastructure of coenobial envelope, 1056
- Scenedesmus obliquus**, 4744, 5728, 8368
 deuterium effects in enzymatic transamination, 8368
 effect of N₂ sources on photosynthetic products, 1057
 influence of light on autospore number, 1055
 isolation of loroxanthin, 574
 use of disintegrated algae, 4692
- Scenedesmus quadricauda**,
 assimilation of nutrients, 6770
 cation requirements, 2509
 disintegration of cells, 3831
 induction of nuclear division, 3830
 influence of light on autospore number, 1055
 nuclear divisions, 4685
 nutrient requirements, 6771
 potassium uptake, 7523
 time courses of synchronous populations, 4687
 toxicity, copper, 4693
 toxicity of copper complexes, 6773
- Schedophilus medusophagus**, 5164
 Gulf of Biscay, 887
- Schedophilus pamarco**, distribution, biology, 3033
- Schimmelmannia plumosa**, distribution, Ibaraki, 3283
- Schistocephalus solidus**, host specificity and rejection, *Gasterosteus*, *Pungitius*, 8513
- Schistosoma haematobium**,
 host location by attractant, *Bulinus*, 5917
 influence of light and depth on host location, 5916
 transmission, 721
 transmission from Volta Lake, Ghana, 230
- Schistosoma mansoni**, 7031
 cercarial production in *Biomphalaria alexandrina*, 7847
 cercarial transmission seasons, Nile Delta, 7686
 control by chemical molluscicides, Tanzania, 7849
 host location, 5918
 predation by *Urticularia*, 7685
 transmission, 721
- Schistosomatidae**, 3941
- Schistosomiasis**, transmission in Zambia, 721
- Schistomysis ornata**, biology, 2698
- Schoenoplectus**, productivity and root/shoot ratios, 4775
- Schooling behaviour**,
 communication of velocity changes, *Trachurus symmetricus*, 9006
 fish, 4269
 influence of dissolved oxygen and carbon dioxide, *Engraulis mordax*, 6391
Lutianus monostigma, Aldabra, 7366, 8176
 pelagic fish, Mid-Atlantic Bight, 6329
- Schizaster**, 7108
- Schizochlamys**, cytoplasmic microtubules, 3246
- Schizochytrium**, 7583
- Schizoporella**, 7931
- Schizoporella cochinesis** sp. n., Indian Sea, 7933
- Schizopyrenus russelli**, cysts, 4818
- Schizothorax intermedius fedtschenkoi**, 8861
- Schizothrix calcicola**, 3801, 8291
 interaction with limestone, 1030
 variations, Bermuda, 1757
- Schizothrix stricklandii**, 4604

- Sciaena diacanthus*, host to *Indocucullanus longispiculum*. 132
- Sciaenidae*, new genera. 429
- Sciaenops*. 7270
- Sciaenops ocellata*, first record, Gulf of Maine. 907
- Silla maritima*, biosynthesis of bufadienolides. 3522
- Scirpetum*. 4776
- Scirpus*, distribution and sociology in Upper-Rhine area. 3869
- Scirpus americanus*, nutrition. 7609
- Scirpus lacustris*. 8423
- bactericidal effects on *Escherichia coli*. 2563
- water purification. 4779
- Sciomyzidae*. 7017
- Scleractinae*. 3326
- Sclerospongiae*. 6871
- Sclerospongiae* class n. 6871
- Sclerotin*, in cuticle of *Orconectes sanborni*. 1922
- Scolecthricea timida*. 8544
- Scolecopsis fuliginosa*, detergent effects. 4557
- Scolex pleuronectis*, parasite of *Fasciolaria tulipa*, Florida. 6902
- Scoliodon dumerilli*, host to *Anaporrhutum stunkardi* sp. n. 1856
- Scoliodon sorrakowh*. 7259
- Scolionema*. 4833
- Scolionema suvaense*, budding. 3328
- Scoloplos acutus*, synonymy. 3974
- Scoloplos armiger*. 5544
- synonymy. 3974
- Scolopsis*. 5172
- Scomber*. 5179, 5188
- histidine deaminase, liver and muscle. 6521
- Scomber gladius*. 5395
- Scomber japonicus*. 8239
- age and growth. 4351
- ecology, Japan. 8183
- gastric hyaluronidase. 7371
- Scomber scombrus*, blood proteins. 6519
- fishing industry, North Sea. 5411
- water soluble arseno-organic compounds. 814
- Scomberesox saurus*. 5163
- population estimates, North Atlantic. 5475
- population estimates, north-eastern Atlantic. 5476
- Scomberomorus cavalla*. 5208
- Scomberomorus maculatus*, haematology, Brazil. 4352
- Scombridae*, aquaculture. 8161
- Japan. 8160
- Scombrobrax heterolepis*, distribution, Pacific and Indian Oceans. 8999
- Scoliodon*. 4270
- Scopelus spinosus*, taxonomy. 7420
- Scorpaena*. 6376
- Scorpaena annobonae* sp. n. 5412
- Scorpaena azorica* sp. n. 5412
- Scorpaena cardinalis*. 8051
- Scorpaena dactyloptera*. 5163
- Scorpaena folgori*. 5412
- Scorpaena guttata*, predator of *Octopus bimaculatus*.
- Scorpaena microlepis*, status and provenance, Florida. 4427
- Scorpaenidae*, taxonomy, Atlantic. 5412
- Scorpaenodes muciparus*, Indian Ocean. 4428
- Scorpaenodes parvipennis*, distribution, Laccadive. 4303
- 3489
- Scorpidium*. 4777
- Scopimera inflata*, feeding. 2699
- Scopthalmus maeoticus*, Romanian coast. 2336
- Scotia Sea, distribution of mass copepods. 1890
- Scottocalanus infrequens* sp. n., Pacific. 4888
- Scottocalanus securifrons*, anomalous records, New Zealand. 4012
- Scrobicularia plana*, energy budget and tidal flat population. 7091
- Scutus breviculus*, effects of external salinity. 8667
- Scyliorhinidae*. 7232
- Scyliorhinus canicula*, biosynthesis of corticosteroids in interrenal gland. 5217
- bound glycans, cornea. 6369
- effect of cerebellectomy on plasma levels of catecholamines. 7263
- influence of stress on catecholamine levels in plasma. 7261
- O₂ affinity of haemoglobin. 359
- Scyliorhinus canicula*. 8945
- Scyliorhinus stellaris*. 5163
- effects of hypoxia on respiration and circulation. 8883
- Scylla serrata*, effect of eyestalk removal on O₂ consumption. 1935
- effect of eyestalk removal on ovarian growth. 209
- myosin ATPase activity. 4083
- Scyllaridae*, larvae, similarity to that of *Jasus*. 1255
- Scyllarides elisabethae*. 7751
- Scyllarides gill*, phyllosoma. 3394
- Scyllarus*, Nistos. 4084
- Scyllarus batei batei*, distribution, Arabian Sea. 4085
- Scyllarus rubens*, distribution, Gulf of Mannar. 4085
- Scyllarus subarctus* sp. n., South Angola. 7805
- Scylliogaleus*. 4270
- Scyllium*, aspartase, liver. 8072
- biosynthesis of macromolecules. 6368
- Scyllium canicula*. 8854
- Scymnodon ringens*. 5164
- Scyphosphaera apsteini*. 3885
- Scytonema guyanense*. 4604
- Scytosiphon*. 6781
- Scytosiphon lomentaria*. 3190
- Scytothamnus australis*, taxonomy. 1788
- Sea grasses, survival and growth when transplanted under artificial conditions. 85
- Sea of Azov, Crustacea, feeding. 1940
- Sea urchin, absolute rates of protein synthesis. 7911
- changes on fertilization in distribution of RNA containing particles in eggs. 7908
- cleavage pattern. 7122
- embryology. 6165
- embryos. 5047
- growth and development. 7907
- isolation of hyaline layer, fertilized eggs. 6174
- multiple RNA polymerases and RNA synthesis during embryology. 6166
- protein synthesis. 5051
- protein synthesis, embryos. 7910
- reaggregation of dissociated embryo cells. 7123
- regulation of neuron composition of cerebellum cortex. 8709
- RNA synthesis. 4183, 5052
- tosylarginine methylester hydrolase, egg membrane. 8704
- Seals, annual variations in island populations. 3546

Seals, contd.,

- grey, death in Cornwall. 2913
- northern fur, migration, Japan. 8026
- with Chlamydia antibodies. 786

Seasonal variation,

- abundance and emergence, Chironomidae, Arkansas. 8611
- abundance of planktonic copepods, Georgian Bay. 2633
- activity and feeding pattern in *Salmo trutta*. 852
- Acartia plumosa*, Indian Ocean. 5955
- acid-soluble nucleotides, liver, *Oncorhynchus nerka*. 6409
- adrenal summer cells, *Rana tigrina*. 4237
- Agrobacterium*, Baltic. 4755
- algal dominance. 3792
- algal populations, Berenplaat reservoir. 6616
- Appendicularia, Madagascar. 5062
- Ascophyllum nodosum*. 8371
- ATPase activity in gills, *Oncorhynchus kisutch*. 7276
- benthos, pond. 3736
- biochemical composition, *Littorina littorea*. 6114
- biochemical composition, *Mytilicola intestinalis*. 8547
- biochemical composition, *Wallagonia*. 882
- buoyancy, *Salmo salar*. 851
- Caryophyllaeus laticeps*, River Avon. 8493
- Chionoecetes opilio*, Japan Sea. 6967
- circa annual periodicity, *Lota lota*. 8976
- Cololabis saira*, California. 8046
- distribution, Appendicularia, North Atlantic. 6201
- distribution, Pisces, Louisiana. 6375
- eggs and larvae of fish, Skagerak. 4304
- fauna, Helgoland Bight. 2398
- feeding rate, *Asterias forbesi*. 8710
- feeding rate, *Balanus balanoides*. 2638
- Foraminifera at Seahorse Key. 3883
- hepatic drug metabolism, *Leuciscus rutilus*. 4374
- inorganic ions, *Rana esculenta* blood. 2060
- in size and reproductive cycle of *Cyathura carinata*. 1908
- insecticide residue, Grand River Ontario. 5565
- Lake Michigan diatoms. 1766
- lipid components, *Orconectes limosus*. 4948
- lipid compositions, *Sprattus sprattus*. 8116
- macroplankton, Banyuls-sur-Mer. 4497
- marine bacteria, Strait of Georgia. 4752
- meat and glycogen, *Ostrea edulis*. 5028
- Merluccius productus*, Pacific. 8047
- meroplankton, Oslo fjord. 9050
- metabolic activities, nucleic acid contents, *Oncorhynchus nerka*. 6408
- muscle ion content, *Rana*. 4230
- nutrients, brackish water environment. 5535
- oxygen consumption, body weight, *Carassius auratus*. 8949
- oxygen consumption, *Littorina littorea*. 7866
- Phaeophyceae, Virginia. 5733
- phytoplankton, Caspian Sea. 6598
- phytoplankton, Delhi lake. 956
- phytoplankton, Gulf of Aden. 5491
- phytoplankton, North Atlantic. 9048
- phytoplankton populations, Banyuls-sur-Mer. 4486
- phytoplankton, Susquehanna River, New York. 9047
- pigments, *Mytilus*. 3470
- plankton, Lake Pääjärvi. 5485
- plankton, Louisiana. 6596
- Rotifera, Canada. 3715
- sex ratio of Corixidae. 1946

- silicoflagellates, Aegean Sea. 8314
- spermatogenesis, *Viviparus ater*. 5012
- succession in fouling organisms, Civitavecchia. 4577

- toxins, *Holothuria leucospilota*. 2827, 8719
- Trachinotus carolinus*, Louisiana. 6531
- upwelling, Gulf of Guinea. 6627
- zooplankton, Caspian Sea. 7431

Seaweed,

- Apulia and Sardinia. 29
- factors influencing iodine enrichment from seawater. 26
- organic production. 1675
- Peru. 3
- used in fertilizer. 8

Seaweed products,

- carrageenan from Irish moss. 6795
- dessert gel composition using extracts, *Eucheuma spinosum*, *Agardhiella tenera*. 5741
- sodium alginate, Phaeophyceae. 5625
- use of sodium alginate for water clarification. 8275
- uses. 8276

Sebastapistes hassi sp. n., Maldive Islands. 6524

Sebastes, 5188

- age and growth, Newfoundland. 6522
- blood serum protein composition by agar-gel electrophoresis. 445
- distribution, North Atlantic. 5509
- immunological analysis of serum proteins. 444
- thermostability of isolated muscle in determining the taxonomic relationship between *S. marinus* and *S. mentella*. 446

Sebastes helvomaculatus, distribution, Gulf of Alaska. 9000

Sebastes marinus, 5413

- larvae. 1663, 1664

Sebastes mentella, 5164, 5413

- diurnal variations in availability. 6523
- ecology, North Atlantic. 9002

Sebastes viviparus. 5164, 8146

Sebastes vulpes, nucleic acids. 816

Sebastes, fecundity, multiple spawning, California coast. 6525

Sebastes diploproa, fibrolipoma. 4430

Sebastes flavidus, feeding and ecology. 908

Sebastes matsubarae. 4575

Sebastes melanops,

- distribution, North Pacific. 4431
- phosphate complexes of soluble fish proteins. 9001

Sebastes miniatus, lactic acid, swimbladder. 4429

Sebastes rubrivinctus, range extension. 909

Sebastolobus. 5188

Secernentea. 7690

Secretion,

- cellulose, *Achlya ambisexualis*. 6819
- cycle, parahypophysis, *Coris julis*. 5392
- lactic acid, swimbladder, *Sebastes miniatus*. 4429
- pars intermedia, *Xenopus laevis*. 6286, 6287
- salivary glands, *Limnaea stagnalis*. 7045
- salt gland, *Larus glaucescens*. 4254
- secretory activity of intestinal epithelial cells, *Diplodiscus subclavatus*. 5896
- transport, storage and release of neurosecretion, *Lethocerus indicum*. 7010

Secretory organs, ultrastructure, Notommata copeus. 6918

Sediment, 7817

- analysis, Bryozoa and Lamellibranchiata. 4136
- analysis of organogenic sediments, Algeria. 4136

Sediment, contd.,

- ATP as indicator of biomass. 6637
 bacteria in use of phytol as carbon source,
 Florida Lake. 4754
 bacteriofauna, Bras d'Or Lake. 7558
 biological composition, Gulf of Fos. 4541
 Black Sea, 2403
 brackish water marsh, Arcachon. 8237
 carbohydrates, Kuril-Kamchatka Trench. 5555
 coastal, ecology, British Columbia. 7440
 consolidated, Bay of Biscay. 8240
 consolidated, Razelm-Sincoe. 4521
 disposal. 5279
 disposal, marine, Bellingham Harbour. 7458
 ecological significance of submerged marine sands.
 6199
 effects of waste water discharge, California. 9091
 False Bay, South Africa. 8241
 fauna, flora, Seychelles. 5549
 Foraminifera, Antarctic Ocean. 4801
 formation of hydrocarbonic fractions of oils. 5611
 influence of deposit-feeding organisms on
 stability. 6635
 Lake Washington, containing oscillaxanthin. 1029
 microbial activities. 5774
 New South Wales. 2473
 organic composition, Kurile-Kamchatka shelf. 5560
 paleontological analysis, North Pacific. 3784
 pigment diversity. 5628
 piston corer. 2451
 sampling. 6697, 6698
 Sepetiba Bay, Rio de Janeiro. 2405
 Tamandare Bay, Pernambuco. 2464
 trawl-board sampler. 3165
 unconsolidated, oceanography pearl culture ground.
 3472
- Seeds**, adhesion, Podostemaceae. 4781
- Segmentina ceonosa**, 4998
- Selar crumenophthalmus**, Gulf of St. Lawrence. 3025
- Semimytilus algosus**. 6145
- Semotilus**. 3642
- Semotilus atromaculatus**. 5931
- Senecelia calanoides**, 6950
 life cycle, Georgian Bay. 2633
- Senegal**,
 Niokolo-Koba National Park, Amphibia. 2047
 Niokolo-Koba National Park, Decapoda. 1238
- Sensory functions**,
 acoustic, *Gadus*, *Melanogrammus*. 8972
 audition, *Anura*. 4216
 audition, frequency sensitivity of neurons, Caiman
crocodilus. 5142
 audition, physiology, Reptilia. 6293
 audition, tone discrimination, *Salmo gairdneri*. 5282
 audition, *Zalophus californianus*. 5160
 electropception, *Gnathonemus petersii*. 5452
 mechanoreception, *Anas platyrhynchos*. 7210
 mechanoreception, *Ensis directus*. 7079
 olfactory discrimination, *Oncorhynchus*. 840
 olfactory discrimination, *Carassius auratus*. 8946,
 8951
 touch, *Dileptus*. 7634
 vision, *Carassius auratus*. 4360
 vision, *Dialommus fuscus*. 4405
 vision, *Eumetopias jubata*. 8025
 vision, nauplius eye, *Pandalus borealis*. 4953
 vision, *Phoca vitulina*. 8025
 vision, spectral response, *Procambarus*. 8600
 visual field defects, *Girella nigricans*. 8990

Sensory organs,

- adrenergic receptors, *Rana*, *Xenopus*. 3513
 amphid, *Halalaimus*. 7697
 ampullary organs of *Eigenmannia*. 870
 ampullary organs of *Gnathonemus petersii*. 5451
 ampullary organs of *Kryptopterus*. 876
 chemoreception in teleost lateral-line systems.
 812
 cutaneous, *Acanthopsis*. 5315
 cutaneous, *Cobitidae*. 5330
 electroreceptors, *Ictalurus nebulosus*. 5342
Elminius modestus. 4019
 gravity receptor, *Octopus vulgaris*. 7904
 lateral-line, *Astroconger*. 5437
 lateral-line, *Hybopsis*. 3644
 lateral-line, *Triturus viridescens*. 2067
 olfactory organ of teleosts. 811
 oral sensory papillae in sea snakes. 783
 papilia X-organ, *Boreomysis arctica*. 180
 proprioceptors, *Astacus leptodactylus*. 5993
 respiratory, sensory system, Decapoda. 206
 skin receptors, *Hypopomus*. 4371
 structure and innervations, *Prosobranchia*. 3457
 touch, *Pagurus bernhardus*. 3370
- Separation**, of invertebrates from sediments. 507
- Sepia**, possible occurrence at Galveston, Tex. 265
- Sepia officinalis**,
 embryonic haemocyanin. 7103
 evolution of endopeptidase. 6161
 oculomotor reactions. 5040
 ultrastructure and function, branchial heart. 3492
- Septodiscus**, Red Sea. 4022
- Sergestes similis**, off the Oregon coast. 1936
- Sergestidae**, possible larval records, Australia. 213
- Seriola**. 5188
- Seriola quinqueradiata**, 4575, 5414, 6526, 7361, 8081
 dietary studies. 5414
 leucocyte numbers. 818
 nucleic acids. 816
 vitamin requirements. 3669, 3670
- Seriolaella orama**. 8051
- Seriolaella maculata**. 8051
- Serolis menziesi** sp. n., Brazil. 7806
- Serology**,
 haemocyanin, *Loligo pealei*, O₂-linked dissociation
 of. 749
 marine vibrios pathogenic to fish. 1113
- Serotype transformation**, *Paramecium aurelia*. 1155
- Serpula**. 3975
- Serpulidae**, distribution, Oahu, Hawaii. 3975
- Serranidae**. 6488, 8488
- Serranus**, fishing industry, Mediterranean. 5415
- Serranus alexandrinus**. 5415
- Serranus gigas**. 5415
- Serrasalmus rhombeus**. 5842
- Serratia**. 3858
- Serratia indica**, tracing sewage dispersion. 1720
- Serraticardia maxima**,
 low molecular weight carbohydrates. 1085
 physiology, floridean starch, florido-side and
 trehalose. 5752
 physiology of carbohydrate. 4726
- Serrivomeridae**. 7232
- Serrulina**. 7019
- Serum glucose levels**, *Carassius auratus*. 6448
- Serum protein**, changes during moult and reproduction
 of *Homarus*. 690
- Sesarma catena**, biology and ecology, compared with
Cyclograpsus punctatus. 210

- Sesarma intermedia*, effects of phytoecdysones. 6992
- Sesarma meinerti*, ecology. 210
- Sesarma plicatum*, effect of salinity on amino acid composition of body fluid. 211
- Seston*, population estimates. 4511
- Setae*, *Austropotamobius pallipes*. 2643
- Setipinna godavariensis*, comparative studies from Indian estuaries. 4353
- Setting of larvae,**
- Crassostrea*. 251
 - Sabellaria alveolata*. 2618
 - Sabellaria spinulosa*. 2619
- Settling behaviour,** *Mytilus edulis*, exposed rocky shores. 6146
- Sewage, (see also Aeration)**
- 5806
 - acetate production during methane fermentation. 1703
 - activated sludge, oxidation of aliphatic compounds. 3152
 - activated sludge treatment. 5572, 5573
 - Adriatic Sea. 9093
 - air diffusing units. 5574
 - algal flocculation. 9077
 - algal sedimentation in control. 7457
 - algal succession. 3143
 - apparatus, activated sludge. 3771
 - apparatus for treatment of water-borne sewage. 501
 - artificial aeration. 9123
 - bactericidal properties of digested sludge toward faecal coliforms. 73
 - biodegradability, combined nylon wastes. 4549
 - biological degradation. 1705
 - biological purification. 9110-9114, 9116-9119, 9121, 9125, 9128
 - coagulating and flocculating agent. 1712
 - concentration of biological solids. 5577
 - control of microorganisms. 7456
 - control, sludge activity measurement. 3763
 - deodorizing. 2428
 - design standards for aerobic oxidation ponds. 9080
 - disposal from coastal towns. 503
 - disposal in marine environment. 3757
 - distribution of hydrobionts, Seversky Donets River. 9084
 - extended aeration. 1707
 - faecal coliform regrowth. 3766
 - gravity thickeners. 4546
 - human pathogen survival. 3753
 - isolation of ether-resistant enteroviruses. 5794
 - jet aeration for activated sludge. 3759
 - O₂ measurement. 508
 - patented activated sludge treatment process. 998
 - patented method for aeration. 995
 - patented treatment plant. 996
 - patented treatment process. 994
 - pollution. 6655
 - pollution control. 5575, 8289, 9062
 - pollution, Danube. 3752
 - pollution, hygiene, North Sardinia. 9095
 - pollution, Marseilles. 7468
 - pollution, Natal coast. 504
 - pollution, River Tyne. 6682
 - poultry industry, treatment. 3756
 - Salmonella. 1723, 1724, 9092
 - sludge activity measurement. 3763
 - sludge incineration, recovery of precipitants. 1717
 - survival of streptococci, elimination in shellfish. 4554
 - symbionts and oxidation ponds. 3765
 - thermal cokification, purification. 1713
 - tracing dispersion, using *Serratia* and *Bacillus*. 1720
 - treatment. 1715, 1716, 5569, 6659-6663, 6665-6670, 8408
 - treatment, activated sludge and endogenous respiration. 1709
 - treatment, activated sludge process. 1710, 1711
 - treatment, biological purification. 5571
 - treatment, design standards for aerobic oxidation ponds. 9080
 - treatment, disinfection by heating. 9108
 - treatment for disposal. 1708
 - treatment of sludge. 2429
 - treatment ponds, Euglena. 4734
 - treatment, purification. 5576
 - viral concentration. 3754
 - water quality protection, Romania. 4543
- Sex,**
- determination, *Dinophilus*. 2622
 - determination, *Dinophilus gyrotilatus*. 7703
 - determination, feedback mechanism, *Lebistes reticulatus*. 6565
 - determination, *Gammarus duebeni*. 3411
 - determination, genetic basis. 8426
 - determination, secondary characters, *Nereis pelagica*. 4876
 - determination, steroid effects, *Oryzias latipes*. 6573
 - determination technique, *Micropterus salmoides*. 5400
 - determination, *Tilapia mossambica*. 3676
 - determination, *Xiphophorus maculatus*, British Honduras. 6590
 - determining mechanism of *Tilapia mossambica* and *Tilapia hornorum*. 914
 - differentiation, *Triturus* spp. 6273
 - Dinophilus gyrotilatus*. 2608
 - reversal, *Onigocia macrolepis*. 8178
 - unisexuality in Entoconchidae. 2750
- Sex ratio,**
- Corixidae, seasonal changes. 1946
 - Dinophilus gyrotilatus*. 1192
 - lobster stocks, New England. 2648
 - Stygionectes. 2700
- Sexual features,** secondary, effects of methyl testosterone, *Poecilia reticulata*. 5467
- Seychelles,** *Lepadichthys caritus* sp. n. 934
- Shark,**
- chromatography of liver oils, Japan. 8071
 - distribution in tuna grounds, Indian Ocean. 5206
 - erythrocytes, effect of oligomycin. 3600
- Shelf life,** sole and perch, EDTA effects. 2935
- Shells,**
- abnormal, *Pteria (Pinctada) martensii*. 747
 - Bivalvia, internal microstructure. 2785
 - Clio pyramidata*, morphology. 4116
 - Crucibulum spinosum*. 1982
 - egg shell of Conchostraca, functions. 7722
 - epithelial cells of mantle of *Pteria (Pinctada) martensii*. 746
 - formation in molluscs. 1988
 - growth, Cymatiidae, New Zealand. 7844
 - growth in *Littorina littorea*. 2758
 - Mercenaria mercenaria*, decalcification. 2796
 - mollusca, Sr/Ca ratio. 1969
 - molluscan, from the R. V. Tansei-Maruk cruise. 1968
 - ornamentation, aiding burrowing in bivalves. 748,

Shells, contd.,

2018

ornamentation, Mollusca. 7840

Shellfish hatcheries. 2006

Shellfish trap, South Africa. 4974

Shelling machinery, for shrimps. 2640

Ships, pumping gear, fish transferral. 5194

Shoaling behaviour, *Clupea harengus*, Korfo-Karaginsk. 8904

Shore based gear, conveyor. 5195

Shrimps,

method for cooking. 1229

shelling by machine. 2640

Shrimp-pots, test efficiency. 1925

Shrimp shelling, process and apparatus. 1898

Shrimp unloading apparatus, patented. 1228

Sialis. 5306, 9086

Siberia, new freshwater diatoms. 536

Siboglinum, embryology. 7136

Siboglinum ekmanni, salinity tolerance. 759

Sicyonella, possible larval records, Australia. 213

Sida. 6937

Siderocelis elegans. 7425

Siderocelis nana. 7425

Sierra Leone,

Petropedetes natator. 302*Tilapia joka* sp. n. 2291* *Siganus*, taxonomy. 5416*Siguara*, 8607

taxonomy, Australia. 4979

Silica, variation, Diatomaceae. 4616

Siltation,

effect on invertebrate fauna of S. African rivers. 976

effect on macrophyte vegetation in S. African rivers. 974

Siluriformes, Weberian apparatus. 2999

Silurus. 5339

Silurus glanis. 3566

Silvering, caused by purines in freshwater fish. 813

Simazin, detoxication by *Chlorosarcina*. 3827Simiosis, sea urchins, *Nereocystis leutkeana*. 3495

Simnia, revision of spp. 224

Simoecephalus. 3354, 6938

Simuliidae,

'ballooning'. 6071

functional morphology of mouthparts. 8630

keys, British Isles. 7821

Simulium,

control of larvae with DDT. 8629

larvae, decreased susceptibility to DDT. 7016

larvae, Ilim River. 8628

Simulium aureosimile, Yemen. 8633*Simulium ibariense*, Poland. 6089*Simulium neavei*, larvae, associated crabs, Tanzania. 8631, 8632*Simulium vitatum*. 6612, 9086*Sinanema*. 7689Singapore, fruiting season of *Caulerpa freycineti* var. *typica* f. *lata*. 2522*Siphlaenigmatidae*, origin and evolutionary tendencies. 4098*Siphoderina*, reinstatement. 5880*Siphoderina paracatalae*. 5880*Siphonaria normalis*, homing behaviour. 8668*Siphonaria pectinata*, destruction of beach rock. 2774*Siphonophora*. 6605, 9052

distribution in the Gulf of Gabes. 3930

Siphonosoma australe, distribution, Visakhapatnam harbour. 5943*Sipuncula*. 8241*Sipunculida*,

coelomic fluid immunology. 2040

Dendrostromum zosterocolum coelomic fluid immunology. 1198*Sipunculidae*, boring structures. 2614*Sipunculus*, iodine accumulation by nephridia. 1199*Sipunculus natans*, biochemistry of tissues. 8538*Sipunculus nudus*. 3875

enzymes, sequencing. 4931

Sipunculus zenkevitchi sp. n. 7137*Siredon mexicanum*,

effects of partial irradiation on tail regeneration. 8781

limb muscle regeneration. 8780

Siren. 6233*Sirenin*,structure, *Allomyces*. 76synthesis, *Allomyces*. 597-599*Sirenia*, temporal bone complex. 2903*Siriella chierchiae*. 6963*Sitticus tullgreni*, ecology, Finland. 8640Size, *Salmo gairdneri*, British Columbia. 2984

Size composition, of lobster stocks, New England. 2648

Size records, *Percina lenticula*. 6510Size relationships, of *Acroneuria californica* and prey. 706

Skeleton,

accumulation of ions into shells, Pteropoda. 6109

axial, *Quisquilius eugenius*. 2285*Balaenoptera musculus breviceauda*. 8843

bone, strontium composition. 4574

Boulengeromyrus. 5439buccal skeleton, *Hemioniscus balani*. 3398chemical components branchial, *Amphioxus*. 4201deformity, *Zalophus californianus*. 3552development of dermal bones, head, *Ophicephalus punctatus*. 7407development of dermal bones, head, *Wallago attu*. 7407*Echinodermata*. 7905endoskeleton, *Ompok bimaculatus*. 6474*Genyomyrus*. 5439*Gnathonemus*. 2971*Gobiidae*. 4383*Haliclona rosea*. 5858homology, skull, *Rhipidistia*. 3037hypercalcaemia, *Anguilla anguilla*. 5435mesodermal endoskeleton, *Brachiopoda*. 4190mesoglea, fibre system changes in morphogenesis, *Hydra*. 5871mineralization, *Unionidae*, Danube. 8684*nassellarian*. 6855ossification of neurocranium, *Leucaspius delineatus*. 8909ossification, *Rana pipiens*. 2857osteology, *Boulengeromyrus*, *Genyomyrus*,*Petrocephalus*. 4444*Pantodon buchholzi*. 7282*Porifera*, Jamaica. 6871

preparation. 5600

rate of calcification, *Halimeda* spp., Cayo Enrique Reef. 4672*Sciaenidae*, Japan. 6489shell aberrations, *Ceratites*. 5032shell mineralogy control, *Bivalvia*. 7062

shell ornamentation, Mollusca. 7840

shell pattern, *Acmaea digitalis*. 7028

Skeleton, contd.,

- shell pigments, *Monodonta turbinata*. 8661
- shell size and weight, effect of agonistic behaviour, *Clibanarius vitatus*. 6010
- shell structure, *Calyptogena*. 6132
- shell structure, *Olivancillaria urceus*. 8662
- shoulder girdle, *Acanthopthalmus semicincta*. 862
- silica variation, *Diatomaceae*. 4616
- Sirenia*, temporal bone complex. 2903
- size of jaw apparatus in fish in relation to age. 8853
- skull, *Erethistoides montana*. 7326
- skull, evolution, *Lacertilia*. 8009
- skull growth, *Zalophus californianus*. 8033
- skull morphology, *Histiophoca fasciata*. 7217
- skull, *Ompok bimaculatus*. 6474
- snail shells, effect of genic time-factor upon differentiation and growth. 6101
- Sclanderiidae*, New Zealand. 3334
- spines, *Echinus*. 755
- Sr/Ca ratio of mollusc shells. 1969
- ultrastructure, *Planktoniella sol*. 5680
- use in aging *Rana temporaria*. 7182
- vertebrate, Japan. 6489
- X-ray patterns of mollusc shells, India. 6098

Skeletonema. 4486, 5670, 7087, 8229

Skeletonema costatum, 3813, 9088

- carbohydrate metabolism. 3714
- hexaene hydrocarbon occurrence. 8322
- variation in photosynthetic characteristics. 4630
- vitamin B requirement. 5684

Skin,

- Egarius bagarius*. 2993
- capacitance changes, hormone-induced, frog. 7176
- cutaneous receptors, electroreceptors, *Eigenmannia*. 4368
- effect of lisaamine green on sodium transport, *Rana temporaria*. 5118
- effect of oxytocin, *Rana esculenta*. 5107
- epidermal organs, *Morulus chrysophakedion*. 4377
- Esox lucius*. 2970
- fish, basement lamella. 1641
- frog, chromatophore responses. 2089
- frog, nerve stimulation. 2081
- frog, staphylococcal α -toxin induced transport and permeability changes. 771
- grafts, *Rana pipiens*. 2063
- receptor organs, *Hypopomus*, ampullary and tuberous organs. 4371
- role of glandular activity in electrical response to noradrenalin in *Amphibia*. 319
- sensory organs, *Acanthopsis*. 5315
- Torpedo marmorata*, biophysical parameters. 810
- ultrastructure, *Triturus cristatus*. 5126

Skrjabinacium exocoetidi gen. et sp. n., (*Trematoda*), Red Sea. 6909

Skull,

- cranial osteology, *Pantodon buchholzi*. 7282
- Erethistoides montana*. 7326
- muscle morphology, *Elasmobranchia*. 7259
- skeleton, *Globicephala*, *Phocaena*, *Delphinus*. 5156
- swimbladder connections, *Megalopidae*. 5272

Slime,

- degradation, yeasts. 6695
- oil-salvaging apparatus. 8257
- removal by burning. 8259

Smittia. 4832

Smithora asiaticum, *Conchocelis* phase. 67

Smittium chironomi. 6814

Smoking, fish, 3,4-benzpyrene content. 2937

Snake, alanylhistidine, muscles. 5153

Snow, red snow of Northeast Greenland. 5698

Soaps and detergents,

- bioassay, *Corexit 7664*. 8252
- cleaning of *Trachurus trachurus*-with surfactants. 9007
- effect on salicylic acid absorption, *Rana pipiens*. 8777

Larodan for cleaning oiled seabirds. 8816

oiled seabirds, British Isles. 8815

Sobolevicanthus krabbeella, cysticeroids. 129

Sodium,

- Chara corallina*. 4644
- control, *Dosidicus*. 5035
- Craspedacusta sowerbyi*. 4841
- effect of propionate and other organic ions on sodium transport across toad bladder. 5082
- flux in frog stomach muscles. 2084
- NACA competition at frog myoneural junction. 2076
- rhopic factor, importance to aquatic life. 3744
- sodium balance, *Aphanius dispar*. 5436

Sodium currents, effect of external potassium in squid giant axon. 2029

Sodium-potassium exchange, in *Platichthys flesus*. 940

Sodium space, in fresh water and sea water eels. 2312

Sodium transport,

- across toad bladder, inhibition. 2052
- across toad bladder, stimulated by elasmobranch 1α -hydroxycorticosterone. 809
- bladder, *Pseudemys scripta*. 5147
- bladder, turtle. 5150
- Bufo marinus*. 5083
- effect of lissamine green, *Rana temporaria*. 5118
- intracellular sodium content, effect of Amiloride, *Rana esculenta*. 5103
- larvae, *Lampetra planeri*. 5197
- stimulants, *Bufo marinus*. 5085

Sodium tripolyphosphate, used to control fish shrinkage during hot-smoking. 803

Sodium uptake,

- Calyptocephalella* skin. 2072
- Salmo gairdneri*. 5297
- Sphaeroma rugicauda* during acclimatization. 4086

Soils,

- destruction of microflora by seawater flooding. 5796
- proteolytic activity of Kiev reservoir soils. 3856
- soil Protozoa, Florida. 5827

Sclanderiidae, histology, New Zealand. 3334

Solar energy, primary production, phytoplankton, world oceans. 6608

Solar Lakes, limnology, Gulf of Eilat. 3732

Solea, 4304, 5179, 6371

North Sea. 8973

tagging, British Columbia. 6575

Solea solea,

- accumulation of DDT. 8216
- amino acid requirements. 3043
- colour change. 5224
- fish farming, UK. 6691
- parasitism by *Entobdella soleae*. 8502
- retinal stimulation and pattern formation. 6587
- visual thresholds and spectral sensitivity. 946

Soleidae. 5461

Solenopagurus, Saint Laurent. 7807

Solomon Islands,

- Acrania. 283
- Discodeles malukuna* sp. n. 2853

Somites, formation in *Xenopus*. 775

Somniosus microcephalus. 5163

- Sorbitol dehydrogenase,
gene duplication, *Clupea harengus*. 6386
Pisces. 8145
- Sorex palustris**, temperature relation and underwater endurance. 3551
- Sound production**, (see also Behaviour, Bioacoustics)
acoustic organ, *Delphinus*, *Tursiops*. 8830
acoustic organ, morphology, *Ovalipes* spp. 4062
Alytes obstetricans. 6205
Chelidonichthys kumu, Japan. 6551
circadian rhythm, acoustic training, *Leucaspis delineatus*. 6401
Clupea harengus, Baltic Sea. 8903
Crinia tasmaniensis. 7959
degree of compatibility, *Bufo* spp. 5077
Delphinus delphis. 8029
Grampus griseus. 4259
Hyla meridionalis. 7161
Pseudophryne semimarmorata. 8759
recognition by auditory cues, *Sterna hirundo*. 8023
Trichopsis vittatus. 7374
Xenopus laevis. 6291
- Sourimis**. 7874
- South Africa**,
Agulhas Current, *Chaetognatha*. 2840
Cape Province, *Regalecus glesne*. 3700
diatoms from Amatola Mountains. 533
effect of land usage on aquatic vegetation at high altitudes. 973
effect of land usage on freshwater fish. 975
effect of siltation on invertebrate river fauna. 976
effect of siltation on river vegetation. 974
Haliotis midae ecology. 3442
mussel poisoning. 2022
Natal, rediscovery of *Puerulus carinatus*. 1274
Natal, Santa Lucia lagoon, diatom associations. 3212
Nephrops andamanicus ecology. 3414
new and rare diatoms. 534
Tellininae. 2805
west coast, *Jasus lalandii*. 193
Western Transvaal, Lake Barberspan, feeding habits of fish. 3636
- South America**,
Centrolophidae. 887
Flagellata. 2573
Hydroides gairacensis. 142
speciation of *Macrobrachium*. 2690
- South Carolina**, new species of *Spirogyra*. 50
- South China Sea**, Gulf of Tonkin, Stomatopoda. 3382
- Southern Ocean**, *Chaetognatha*. 2042
- Spain**,
coast, *Patella safiana* fluctuations. 1995
Iberian peninsula, Heteroptera ecology. 3425
- Spaniorinus**. 7874
- Sparganium**. 8137
- Sparidae**, taxonomy in nomenclature. 2287
- Sparidea**, North-West African coast. 447
- Spartina alterniflora**. 3865
amino acids in estuarine environment. 5816
- Spartina anglica**, Denmark. 6829
- Sparus aurata**. 5164
- Spawning**, (see also Reproduction)
Amphibia, Zürich lake. 2066
Asterias amurensis. 6170
Donax cuneatus, Madras coast. 4149
maturation of *Johnius dussumieri*. 896
Mugil cephalus, Kochi Prefecture. 2324
regularity, fish. 2952
suppression of egg-laying by snails infected with *Spirorchis scripta*. 6115
Teleostei, Gulf of Gascony. 817
- Spawning behaviour**,
Arcachon Bay, *Platynereis dumerilii*. 7709
artificial, *Centropomus striatus melanus*. 7351
Carassius auratus. 5323
Clupea sprattus, Baltic Sea. 5256
Cypsilurus opisthopus, Japan seas. 3688
Lutjanus synagris. 5398
Oncorhynchus nerka, Alaska. 6413
Perca flavescens, aquaria. 3667
Pleuronectes platessa, North Sea. 5465
use of trichloroacetic acid for gonadotrophic hormone extraction, Catla, Labeo, Cirrhina. 6450
- Spawning grounds**,
Gadus morhua, Bornholm basin. 5375
intertidal and freshwater, *Oncorhynchus gorbuscha*, Alaska. 8097
Leuciscus, Rutilus, and *Abramis*, Kuybyshev Reservoir. 7333
Tehema-Colusa Canal. 5278
Theragra chalcogramma, Japan. 8153
- Spear gun**, patented explosively-armed head. 510
- Specaria josinae**. 6929
- Speciation**,
Bufo arenarum. 6217
degree of similarity of *Bufo arenarum* subspp revealed by biometrics. 5078
fish, African lakes. 3024
Hydromantes, Appennines. 6226
Macrobrachium, America. 2690
mating calls, degree of genetic compatibility and hybrids, *Bufo* spp. 5077
siblings of *Halicarcinus*. 2647
Spirorchis, parasite of *Chrysemys*. 5919
subalpine lakes. 7438
- Species diversity**, models. 1727
- Spectra**, emission, organic matter, marine environment. 3746
- Spectrometric analysis**, *Chlorella*, *Chlamydomonas*. 4654
- Spelaodiaptomus**. 7732
- Spelaodiaptomus rouchi** gen. et sp. n., (Copepoda). 7732
- Sperchius**, proposed suppression. 194
- Sperchius lucidus**, proposed suppression of lucidus. 194
- Sperm**,
Anura. 7144
Aplysia spp. 3436
Aplysiidae. 7842
Arbacia punctulata, *Strongylocentrotus*. 4179
chemotactic turning behaviour, *Tubularia crocea*. 6897
Cypridopsis. 4091, 4092
cytoplasmic inclusions in *Clibanarius longitarsis* and *Diogenes miles*. 1242
DNA content, *Emerita analoga*. 6013
DNA interactions, *Clupea harengus*. 5264
effect of colchicine, *Nitella*. 8357
effect of hypercalcaemia on acrosomes. 7108
Epitonium (Cinctiscala) eusculptum and E. (C.) eximium. 1984
fish. 2954
fish aminotransferases. 2989
fractionation, *Hemicentrotus*, *Anthodidaris*. 5049
Gnathostomula spp. 1176
Misgurnus fossilis. 6473

Sperm, contd.,

- Octopus dofleini martini*, North Pacific, 6159
 - Pecten maximus*, 6148
 - Poecilia reticulata*, 1644
 - Poecilia reticulata*, flagellated spermatogonia and spermatocytes, 1645
 - production, transfer and assimilation, *Entobdella soleae*, parasites, 8502
 - properties and function of respiratory chain, *Hyriopsis schlegelii*, 8674
 - satellite DNA, *Lytechinus variegatus*, 7118
 - spermohistogenesis in *vas deferens*, *Ostracoda*, 7813
 - stain, Pisees, 5167
 - thermodynamic study of flagellar movement, Invertebrates, 7610
 - Trypetes* (= *Alcippe*) *nassarioides*, 1896
 - Turbellaria*, development of, 2585
 - ultrastructure, *Carassius auratus*, 7305
 - ultrastructure, *Libinia emarginata*, 7779
 - ultrastructure, *Palaemon elegans*, 1930
 - ultrastructure, *Pennaria tiarella*, 7673
- ## Spermatogenesis,
- Asellus aquaticus*, 1901
 - chronology, *Poecilia spheonops*, 942
 - Ciona intestinalis*, 6200
 - effect of Methallibure, *Poecilia reticulata*, 2328
 - Gnathostomula*, 1176
 - microscopy, *Phyllaplysia taylori*, 7869
 - Poecilia reticulata*, 1643, 1646
 - seasonal variations, *Viviparus ater*, 5012
 - temperature-photoperiod effects on, in *Plethodon cinereus*, 767
 - ultrastructure, *Aplysilla rosea*, 8461
- ## Spermatophore,
- Hestonides gohari*, 2611
 - production, *Ambystoma jeffersonianum*, 762
- ## Spermatozoopsis exultans,
- 6597
- ## Spermiozoogenesis,
- Balanus perforatus*, 3366
 - Cypridopsis, 4091, 4092
 - chronology, *Poecilia spheonops*, 942
 - Eudendrium racemosum*, 4843
 - nuclear maturation in *Hydra*, 639
 - Spisula solidissima*, acrosomal vesicle, formation, 4163
- ## Sphaecelaria norrisii sp. n.,
- 6726
- ## Sphaenorhynchus aurantiacus,
- taxonomy, 3521
- ## Sphaerechinus,
- 6631
- ## Sphaerechinus granularis,
- 7120
- ## Sphaeridiotrichix compressa,
- morphology and taxonomy, 8323
- ## Sphaeritidae,
- energy flow in population, White Sea, 4162
 - taxonomy, 5013
- ## Sphaerium transversum,
- intermediate host of *Crepidostomum*, Mississippi, 5891
- ## Sphaeroides armilla,
- parasitism of intestine by *Discogasteroides australiensis* sp. n., 5897
- ## Sphaerolaimus uncinatus sp. n.,
- Deep Sea, 7699
- ## Sphaerolana gen. et sp. n.,
- (Isopoda), Mexico, 7808
- ## Sphaeroma hookeri,
- elementary composition, 4087
- ## Sphaeroma rugicauda,
- changes in genetic constitution of a population, 1937
 - sodium uptake during acclimatization, 4086
- ## Sphaeroma serratum,
- elementary composition, 4087
 - glycoproteins in digestive caecum, 212
- ## Sphaeroma walkeri,
- effects of exposure, 4088
- ## Sphaeromidae,
- distribution, Gulf of Marseilles, 4037

Sphaeronellopsis dikrothrix sp. n., from *Metavargula ampla*, 1275

Sphaerospora poljanskii sp. n., 6836

Sphaerotilus, growth rate in polluted environment, 3909

Sphaerotrichia, 6781

Sphagnorubin, *Sphagnum magellanicum*, 5817

Sphagnum, 4777

distribution in Scandinavia, 3870

growth measurement, 5818

Sphagnum angermanicum, distribution in Norway, 4773

Sphagnum magellanicum, *Sphagnorubin* composition, 5817

Sphecoidea, ecology, marshy meadows, 2719

Sphenocephalus, 5205

Sphenocephalus brachypterygius sp. n., 5205

Sphenodon, 8732

Sphenodon punctatus, erythropoiesis, 6295

Spheroides, status, characters, distribution, 947

Spheroides maculatus, antidote to toxins, 5477

Spheroides pardalis, 4575

Spheroides testudineus, teeth, 1650

Sphinctozoa, 6870, 7655, 7656

Sphyraena acus, 5438

Sphyrion lumpi, on cod and Greenland halibut, 1220

Sphyrna, 4270, 8879

distribution, Georgia, 4295

Sphyrna diplana, 7269

Sphyrna lewini, albinism, 8073

Spicara smaris, 7267

Spicules,

Calcarea, 7658

contents, *Haliciona rosea*, 5858

Porifera, 7657

Spinach ferredoxin-NADP-reductase, *Anacystis nidulans*, 6737

Spines, skeletal tissue of *Echinus*, 755

Spinitectoides berlandi sp. n., 3950, 8515

Spinitectus beaveri sp. n., parasite of *Albula vulpes* Florida, 5935

Spirobranchus, 3975

Caribbean, 6932

Spirobranchus giganteus, 3975

Spirodela oligorrhiza,

nitrogen metabolism, 3311

photo-related aging, 3872

Spirogyra, 3799, 4509, 6742

cytokinesis, 4694

growth patterns and motility, 4695

mitosis, ultrastructure, 3245

ultrastructural aspects of cell wall synthesis, 5730

Spirogyra caroliniana sp. n., S. Carolina, 50

Spirolegoceras, 6154

Spirorbinae spp. n., West Indies, 6933

Spirorbis, 3314, 5550

Spirorbis (Laeospira) borealis, cytology of 'neoblasts', 658

Spirorbis pagenstecheri, epibiotic on *Littorina*, 4124

Spirorbis (Paradexiospira) vitreus, cytology of 'neoblasts', 658

Spirorchis, speciation, 5919

Spirostomum,

electrical responses, 7645

protein and RNA synthesis, 8452

Spirostomum ambiguum,

conjugation, 109

effect of β and α_2 -guttiferins, 107

effect of high hydrostatic pressure, 625

- Spirostomum ambiguum**, contd.,
phosphatases, urease, dehydrogenase. 5832
polysaccharide and calcareous inclusions. 624
- Spirula spirula**, growth and development. 2815
- Spirulina**, 3732
photosynthetic pigments, Lake Tchad. 3208
- Spirulina geitleri**, mineral content. 4615
- Spirulina platensis**, 8231
mineral content. 4615
ultrastructure, proteins. 5640
- Spirulina subsala**, 7487
- Spiruridae**, parasites of fish around Nantes. 8515
- Spisula**, 7117
- Spisula sachalinensis**,
chemical extraction of glucanohydrolase from crystalline style. 8682
histology, reproductive organ. 7895
population studies, Japan. 6142
- Spisula solidissima**,
mitosis, cardiac tissue. 3479
polysome and RNA synthesis, early developments. 7894
spermiogenesis. 4163
- Spitzbergen**, *Oncorhynchus gorbuscha*. 2973
- Splophanes**, 5551
- Spondyliosa cantharus**, 5163
- Spondylus**, Palaeogene evolution. 4164
- Spondylus gaederopus**, association with *Crambe crambe*, Mediterranean. 6886
- Spongilla**, 4826
- Spongilla fragilis**, associated with insects. 703
- Spongilla lacustris**, ultrastructure of spicules. 6867
- Spongillidae**,
Bismarck Archipelago. 3907
checklists, Australia. 3910
developmental physiology. 6879
distribution, Shikoku. 4826
keys, Australia. 3910
phagocytosis and pinocytosis. 4830
physiology. 6881
- Spongomorpha**, 8326
ultrastructure. 8352
- Spores**,
aplanospores, proline content, Valonia. 3248
auxospores, *Cyclotella*. 1763, 5661
Blastocladia emersonii, cytochrome oxidase activity. 4769
dark treatment, *Gelidium*. 3190
differentiation, *Thalassomyces*. 5768
effect of high carbon dioxide content, *Chlorella*. 8343
evolution of Golgi body, *Griffithsia flosculosa*. 4713
germination of tetraspores, *Gymnothamnion elegans*. 8382
Kentrosphaera borzi. 6767
liberation and germination in *Gloiopeltis*, Japan. 4711
oospore culture, *Aphanomyces euteiches*. 6817
Porphyra miniata. 4718
Ralfsia spp., Nova Scotia. 4703
resting spore, *Pyrodinium bahamense*. 3290
tetraspores occurrence, *Naccaria wiggii*. 4715
ultrastructure, *Minchinia* spp. 5841
zoospore discharge, *Thraustochytrium kinnei*. 7590
zoospores, protein synthesis, regulation, *Blastocladia*. 3302
zoosporogenesis, *Radiosphaera negevensis*. 8366
zoosporogenesis, *Tetracystis excentrica*. 4697
- Sporobolus**, 7596
- Sport fishing, California, 1968. 3581
- Sprat fishery, England. 5255
- Spratticeps gaultinus** gen. et sp. n., (*Clupeiformes*) Cretaceous, British Isles. 8897
- Sprattus sprattus**,
blood protein polymorphism. 6439
larva. 819
seasonal variations in lipid compositions. 8116
- Spriodella polyrhiza**, 3871
- Spyridia filamentosa**, morphology. 589
- Spyroidae**, skeleton. 6855
- Squalidus**, taxonomy. 419
- Squalus**, 4270
distribution, Georgia. 4295
- Squalus acanthias**,
characteristics of ATPase in erythrocytes. 5218
corticosteroid synthesis in interrenal glands. 5217
electron microscope studies, crystalline structure of teeth. 4299
glyceryl ether metabolism, and buoyance regulation. 4300
glycosaminoglycans in nonswelling corneal stroma. 8884
interrelations, pituitary hormones. 8075
melanocyte-stimulating hormone. 8074
tags and migration, North Atlantic. 5219
- Squalus megalops**, thrust of tail. 3598
- Squatina squatina**, 5163, 5164
- Squid**, 7898
effect of AChase, inhibitors, giant axons. 7902
effect of cholinesterase inhibitors on giant axon. 267
giant axon, ammonium ion currents. 2028
oscillation and repetitive firing of axons. 6157
potassium fluxes in dialysed axons. 2030
- Squilla desmaresti**, 7780
- Squilla empusa**, spectral sensitivity, flicker response. 3381
- Squilla mantis**, 7780
- Squilla oratoria**, 4575
inhibitory synapses on pacemaker neurons in heart ganglion. 1943
- Squilloides latus spinosus** subsp. n., Gulf of Tonkin. 3382
- Stagnicola bouilleti** sp. n., Bavaria. 7042
- Stagonospora**, 6815
- Staining**,
argyrophil adenohypophysial cells, *Salmo irideus*. 8924
cell viability, Protozoa. 4809
chloride-secretory cells, *Gambusia affinis*. 4450
clearing, fishes. 3555
for light and electron microscopy. 8265
Paramecium. 7643
pellicle, *Opalina ranarum*. 5844
ruthenium red binding, fish extraocular muscles. 3703
softening of calcified tissues. 6168
sperm, Pisces. 5167
techniques, algae. 4603
- Stammeridium** nom. n., designation of species. 5850
- Standing crop**, (see also Population estimates)
Foraminifera in epiphytic salt marsh communities. 1141
- Staphylinidae**, 3732
- Staphylococcus**, 8871
- Starvation**,
Crangon vulgaris. 4039
effect of haemolymph proteins, *Carcinus maenas*.

- Starvation, contd.,**
3387
effect on reproduction and oviducal activity, *Rana cyanophlyctis*. 316
effect on respiration and nutrient stores, *Thais lamellosa*. 6126
Nassula. 3892
osmoregulation effects, *Corophium volutator*. 8573
potential weight loss, *Salmo gairdneri*. 5283
Rana pipiens. 4234, 4235
survival aptitude, *Loligo pealei*. 8688
- Statistical analysis**, 3782, 8262
aggressive communication, *Gonodactylus bredini*. 8580
average lengths of fish, India. 4281
- Statistics**, 3782
behaviour of Teleostei. 7307
capture-recapture methods. 2455
geographic variation analysis. 2440
logarithmic series and lognormal distribution. 3125
'Morris plot'. 8262
- Statocysts, see Balance organs.**
- Staurois bathurstensis* sp. n. 5656
- Staurophora*. 4832
- Stegostoma*. 5062
- Steindachneria*. 7344
- Stellicola acanthasteris* sp. n., Eniwetok. 4899
- Stellantchasmus falcatus*, parasite of *Mugil cephalus*. 6910
- Stelligera stuposa*. 3904
- Stelligera stuposa* f. *rigida* f. n. 3904
- Stenassellus costai* sp. n., Somalia. 6049
- Stenella**,
composition of milk. 4267
oesophagus and stomach histology. 3550
- Stenella caeruleoalba*. 7227
acoustic system. 2912
embryogenesis of gonads. 338
twin fetuses. 8833
- Stenella euphrosyne*, Mediterranean. 8031
- Stenella graffmani*, colour patterns. 6317
- Stenella styx*. 5159
- Stenelia bermudensis* sp. n., Bermuda. 3360
- Steno bredanensis*, creative behaviour. 7228
- Stenobrachius leucoparsus*. 7232
- Stenocionops furcata*. 5863
- Stentor coeruleus*, reversible inhibition of cilia
regeneration by iso-propyl-n-phenyl carbamate. 626
- Stephanodiscus*, taxonomy, ultrastructural study. 5669
- Stephanodiscus hantzschii*. 8308
extracellular release of organic matter. 25
- Stephanodiscus rotula*, *Podochytrium cornutum* parasite, British Isles. 4771
- Stephanolepis cirrifer*, feeding. 3601
- Stephanostomum casum*. 5880
- Stephanostomum japonocasum*. 5880
- Stephoidae*, skeleton. 6855
- Stephos*, ecology, Bahamas. 6952
- Stercorarius parasiticus*, polymorphism and behaviour, Arctic. 8022
- Sterculic acid*, effect on hepatic lipids, *Salmo gairdneri*. 8921
- Stereochemistry**, hydrogen elimination during the conversion of cholesterol by *Tetrahymena*. 1148
- Stereoderma incerta* sp. n., Spain. 7906
- Sterna albifrons*, breeding, California. 7208
- Sterna hirundo*, recognition by auditory cues. 8023
- Sternopsis*. 7440
- Sternopsis capillata* sp. n. 3976
- Sternopsis scutata*, Texas coast. 1200
- Sternarchus albifrons*, environmental preferences. 420
- Sternoptychidae**, 7232
distribution, Gulf of Mexico. 4314
- Sternoptyx**, 8039
distribution, Gulf of Mexico. 4314
- Sternoptyx diaphana*, retinal structure. 8929
- Sternothaerus odoratus*. 8011
- Stero-bile acids**. 4367
- Steroids, (see also Hormones)**
aldosterone, moulting, frog. 7180
aldosterone, *Natrix cyclopion*. 3540
biosynthesis, absence, *Callinectes*, *Balanus*. 7758
defence mechanism, *Ilybius fenestratus*. 6083
effect, brain, frog. 7191
effect, *Crassostrea gigas*. 3463, 3464
effect on secondary sexual characters, *Oryzias latipes*. 7411
effect on seminal vesicles, castrate *Heteropneustes fossilis*. 5337
18-hydroxycorticosterone synthesis, adrenocortical tissue, Teleostei. 7346
11-ketotestosterone production, ovaries, *Portunus trituberculatus*. 6988
Myxine, *Petromyzon*. 5201
testosterone, *Oryzias latipes*. 6573
- Sterols**,
biosynthesis of $\beta\beta$ -sterols in mesogastropods. 729
C-21 sterols, defensive secretions Indian Coleoptera. 6076
Chlorella, containing ergosterols. 1773
cholesterol, *Euglena gracilis*. 5759
Rhodymenia palmata. 6793
Synura petersenii. 1769
- Stethojulis interrupta*. 8154
- Stichaeus grigorjewi*, extraction of toxins from roe. 9003
- Stichaeus punctatus*, Massachusetts Bay. 448
- Stichococcus**,
large scale cultivation. 4696
morphological variation in culture. 6774
- Stichopus mollis*. 8701
- Stictochironomus*. 9064
water level effect on Lake Kariba. 4100
- Stictoporellina*, distribution, Minnesota. 6195
- Stigeoclonium*. 6742
revision of genus. 51
- Stigeoclonium tenue*. 7501
cation requirements. 2509
- Stimulants**,
adrenalin, acetylcholine, heart, *Rana temporaria*. 8778
gastrin on gastric secretion, *Rana catesbeiana*. 7978
influence, secretion of acids, stomach, frog. 7969
- Sting**,
Chrysaora quinquecirrha. 116
Gonionemus vertens. 120
protection, anemone fish. 3034
- Stinging organs**, *Ipomoea pescaprae*. 3324
- Stirnorgan*, bullfrog, pre-excitatory inhibition. 2882
- Stizostedion**,
aquaculture. 2923
epidermal lesions. 4432
- Stizostedion canadense*, purines responsible for silvering. 813
- Stizostedion vitreum*. 5565, 7273
activity periods, Lake Heming. 4319

- Stizostedion vitreum**, contd.,
epidermal lesions, virus infections. 4433
purines responsible for silvering. 813
swimming ability of larvae. 449
- Stizotiedion vitreum vitreum**, maturity and fecundity,
Lake Erie. 910
- Stolella**. 5056
- Stolonophora** gen. n., (Cystoseiraceae), Mexico. 1789
- Stolophora**. 3933
- Stomach**,
AMP and glycogenolysis in gastric mucosa of
frog. 312
Asellus aquaticus and Jaera albifrons. 177
frog, phosphorylase and AMP activity. 311
- Stomach content**,
fish, use in emetics. 2288
juvenile *Oncorhynchus* spp. 842
- Stomateus cinereus**, mutations. 8185
- Stomatopoda**,
distribution, Atlantic. 4904
distribution, Gulf of Tonkin. 3382
eyestalk histogenesis, larvae. 7780
glandular organs in antennae of larvae. 3403
Madagascar. 7746
- Stomiidae**. 7232
- Stomolophus**. 4833
- Stomopneustes**, Hatakeziama Island. 4177
- Storage**,
guttated *Melanogrammus aeglefinus*, α GPD as index.
4390
influence of platen temperature and freeze drying on
quality, Alaska pollack. 4393, 4394
survival effects, Chlorophyceae. 3251
- Storage effects**,
actinomycin, denatured protein. 7321
Chlorophyceae. 3252
discolouration of frozen meat during defrosting. 7383
drained weight determination, Cancer magister.
6057, 6058
factors affecting fish taste. 3585
freezing of gonads, Echinoidea. 8722
microbiology of fish fingers. 3586
muscle cathepsin. 3577
TMAO decomposition in muscles, Pisces. 8850
- Strains**,
algae, collection. 3193
taxonomy, *Chlorella*. 8342
- Strandesia sudanica** sp. n. 7000
- Stranding**, Hyperoodon, Nova Scotia. 6306
- Stratification**, African Lakes. 3730
- Stratiopontotes mediterranea** gen. et sp. n. 4003
- Stratospongilla lanei** sp. n. 3910
- Streamlining**,
functioning of ctenoid apparatus, Pisces. 7268
Pisces. 7267
- Streams**,
ecology of insects. 6066
torrential, ecology. 2723
- Stretch receptors**, *Aplysia dactylonela*. 5001
- Streptococcus**, stream pollution. 5567
- Streptococcus faecalis**. 6806
- Streptomyces**. 3303
- Streptotheca**. 3849
- Striaria attenuata**, 5733
reproduction. 5736
- Stridulation**, by Crustacea. 146
- Strigeidae**. 3941
- Strigomonas oncopelti**, ultrastructure of flagella. 110
- Stroamtospongia norae** gen. et sp. n. 3911
- Strobilation**, jellyfish. 1844
- Stromatospongia** gen. n., (Spongillidae). 3911
- Stromatospongia vermicola** sp. n. 3911
- Strombidium**. 3889
- Strombus gibberulus**, distribution, Indonesia. 7054
- Strombus terebellatus**, distribution and morphology
complex. 2775
- Stromia** gen. n., (Flagellata), Brazil. 2574
- Strongylocentrotus**, 8429, 8722
ADP control of respiration after fertilization. 5055
association of DNA polymerase with chromatin,
embryos. 7128
ATP in respiration control. 5053
changes in protein concentration, perivisceral
fluid. 7922
commensal with *Dulichia rhabdoplastis* sp. n. 3389
development, planktonic larvae, Japan. 7923
effects of grazing on benthic algal populations. 2033
- Strongylocentrotus intermedius**, palatability of gonad
after freezing. 8722
- Strongylocentrotus nudus**, changes in aspartate
aminotransferase activity in early development.
757
- Strongylocentrotus purpuratus**, 7913
glycogen storage and synthesis, gut. 7925
isolation of dithiothreitol, fertilization membrane.
6181
L-malate dehydrogenase in development. 7924
population explosion, California. 4188
predation by *Dermasterias imbricata*. 8712
separation of cortical granules from eggs. 5054
spermatogenesis. 4179
- Strontium**, 3833
accumulation and ash content, hydrobionts. 3185
concentration in mineralized tissues. 4574
distribution, Sea of Okhotsk. 4305
effect on carbohydrate synthesis, *Protosiphon*. 6769
uptake, aquatic plants, Ontario. 7599
- Strontium-90**, determination in water. 2460
- Strophitus**. 7060
- Strophomena**. 7130
- Structure**, Chrysophyceae. 5642
- Struvea**. 8326
- Struveopsis** gen. n., (Chlorophyceae). 575
- Strychnine**, effect of afferent discharges of bullfrog.
2087
- Styela clava**, 8431
English Channel. 6197
- Styela coriacea**. 5060
- Styela etheridgii**, parasitisms by *Haplostomella*
australiensis. 4006
- Styela partita**. 7139
- Styela putris**. 8431
- Styela similis** sp. n. 7938
- Styelidae**, ecology, Caribbean. 7139
- Stygonectes**, sex ratio. 2700
- Stygonectes emarginatus**. 7742
- Stygonectes spinatus**. 7742
- Stylaster brunneus** sp. n., New Caledonia. 6896
- Stylasterina**, collected by the Israel South Red Sea
Expedition. 123
- Stylochus ellipticus**, predator on oysters. 5920
- Stylodrilus heringianus**. 6929
- Stylonchia**, cortical anatomy and morphogenetic changes
binary fission. 5851
- Stylonychia mytilus**,
conjugation. 7646
destruction of polytene chromosomes. 1841

- Stylonychia notophora*,
effect of actidione on cell cycle. 3898
organization and development of macronuclear
anlage. 4819
- Stylomcolex opisthotectus* sp. n., Kamchatka. 6928
- Suaeda*. 7596
- Suaeda maritima*, distribution, Norway. 4794
- Subbotina*. 5839
- Suberites carnosus*, microflora, Lago di Faro. 4831
- Suberites ficus*. 6877
- Submarine topography*, coralligenous beds,
Mediterranean Sea. 6631
- Submarine vessels*, acoustically transparent
hydrodynamics. 6711
- Subsilicea fragilarioides* gen. et sp. n. 5686
- Substrate*,
effect on distribution of *Clymella torquata*. 2607
particle size, effect on stream macrobenthos. 3110
- Substratum*, effect on detachment of *Fucus*. 2530
- Subterranean environment*,
Copepoda. 7732
Niphargus, Italy. 4944
- Succinate*, oxidation in *Crassostrea virginica*. 2809
- Succinate dehydrogenase*,
development, *Tubularia*. 7678
localization in fins, dogfish. 7622
nervous system, *Anodonta cygnea*. 7074
- Succinate production*, enzymes, *Rangia cuneata*. 2016
- Succinea putris*. 8431
- Suctorina*, 3901
occurrence of Arachnida. 6837
- Suctorida*. 3881
- Sudan*,
helminths from freshwater fish. 124
plankton of the northern White Nile. 952
- Sudanonautes africanus africanus*, salt and water
balance in effect of desiccation. 1938
- Sudis*, postlarval, Atlantic. 3046
- Suez Bay*, *Tilapia zilli*. 3677
- Suffocation*,
changes in swimbladder gas composition, *Mugil*
cephalus. 9037
effect on free fatty acids in carp. 407
effect on respiration and circulation, *Scylliorhinus*
stellaris. 8883
hypoxia effects on damage, *Chlamydomonas*. 8337
- Sugars*, polysaccharides from *Porifera*. 6875
- Sulcospira*, taxonomy, Japan. 3453
- Sulfisoxazole*, effect on *Fundulus heteroditus*. 927
- Sulphate*, control of culture, *Astasia longa*. 4642
- Sulphate regulation*, in jellyfish. 1846
- Sulphite reductase*, algae. 4596
- Sulpholipids*, disulphate of (+)-1, 14-docosanediol in
Ochromonas danica. 18
- Sulphoquinovosyl-diacyl glycerol*, from algae. 514
- Sulphoxide tin complexes*, antimicrobial, algicidal,
molluscicidal. 1747
- Sulphur*,
Black Sea. 5564
carbon interaction, meromictic lakes. 5521
compounds evolution, unicellular marine algae. 4727
effect on seaweed population, Vulcan Island. 4582
nutrition, *Microcystis*. 5635
- Sun*, persistence of vitamins, seawater. 5553
- Sunaristes*, associated with hermit crabs. 164
- Supersaturation*, atmospheric gases in coastal waters,
Maine. 498
- Suphisellus bicolor*, introduction, California. 6074
- Supra-oesophageal ganglion*, role in responses to
hydrostatic pressure in *Nephtys*. 655
- Surinam*,
Ailophryne ruthveni. 2048
Dendrobates azureus sp. n. 2055
- Surirella*, Egypt. 24
- Surirella voigtii*. 7495
- Surveys*,
cave flora, British Isles. 6800
chemical oceanography, South Atlantic. 5552
echo-sounding, Thunnus, Indian Ocean. 7384
Esox sp., south-west Africa. 5271
fauna, Andriandrano River. 3729
fauna, Lake Lanao. 3735
fauna, Primorye, Sea of Japan. 6625
fauna, salt lakes, British Columbia. 3742
fauna, Vema Seamount. 6636
flora and fauna, Florida Bay. 7797
flora and fauna, freshwater environment, Panama
and Columbia. 6615
flora and fauna, Icelandic thermal waters. 6612
flora and fauna, Marsala. 4517
freshwater fauna, Ceylon. 6621
Gastropoda, Anatolia. 7025
German commercial herring fisheries. 5237
herring, Iceland. 5233
immature herring, North Sea. 5243
littoral environment, Lyme Regis. 7441
meiobenthos, Pacific Ocean. 6630
Mollusca, Queensland. 7024
Mollusca, South Arabia. 7059
molluscs, springs, Ancona. 7023
Oncorhynchus nerka, Alaska. 6416
Oniscoidia, Thau Basin. 7741
plankton samplers. 3707
Porifera, Arctic, Antarctic. 6874
Porifera, Sagami Bay. 7661
sessile fauna, Glenan Archipelago. 4523
South Orkneys. 8260
Swanage Bay, British Isles. 8242
systematic entomology, Israel. 6067
Tamar Estuary. 3743
Toheroa survey, Wellington, West Coast. 4137, 4138
traps, migrating fish. 8891
vertebrates for parasites, Malaysia. 8034
vertebrates for parasites, Philippines. 8035
- Survival*,
salmon, fingerling quality. 2979
TTC as indicator, *Laminaria japonica*. 7533
- Survival aptitude*,
algae. 7487
anaerobiosis, *Pseudemys*. 3535
Asterionella formosa. 5663
Bufo marinus, south Florida. 5081
Chlorophyceae. 3251
coloration changes, *Rana pipiens*. 7988
Cyanidium caldarium. 7491
dormancy, *Nematoda*. 7691
Elodea, Jupiter-atmosphere. 6820
Eupleura, *Urosalpinx*. 8654
fingerlings, *Ictalurus punctatus*. 6467
freezing, *Mytilus edulis*. 8678
Gasterosteus aculeatus trachurus, deionized water.
5449
hatchery-reared larvae, *Salmo*, Scotland. 6435
increased by addition of molybdenum, California,
Salvelinus. 7294
Lampetra fluviatilis. 7252
Melanogrammus aeglefinus. 8147
Oncorhynchus nerka. 6420

Survival aptitude, contd.,

- Oncorhynchus tshawytscha*, Washington. 6424
 ontogeny quality, fish. 4269
 poliovirus in sea-water. 8422
 radiation sensitiveness. 6223
 rehydration rates, *Bufo* spp. 7951
 salinity tolerance, *Elysia viridis*. 6110
Salmo salar, Maine. 6432
Salmonella, *Escherichia coli*, in oysters. 7572
 spawning, *Elysia viridis*. 7039
 starvation, *Loligo pealei*. 8688
 supercooled *Fundulus heteroclitus*. 6557
 temperature adaptations, copepod eggs. 7723
 temperature relations and underwater endurance, *Sorex*. 3551
 thermoresistance, Ciliata. 6831
 toxin tolerance, *Daphnia magna*. 7721
 transplanted *Oncorhynchus gorbusha*, Alaska. 6404
 UV-light, *Euglena*. 7549
 viruses, processed, frozen oysters. 7591

Suspended material,

- distribution, Atlantic Ocean. 6642
 south eastern Baltic Sea. 5562

Suspended particles, determination of volume size.
2347***Suxenella crucigenaeformis* gen. et sp. n.,**
(Chlorophyceae), India. 7524**Swamps,**

- adaptations of *Alma emini* to low oxygen level. 7702
 algae, Ardenne. 7484
 Athiorhodaceae distribution. 7574
 benthic algae, Åkhult Mire. 7485
 Chrysophyceae, Ardennes. 7494
 mangrove Decapoda, Pernambuco. 1906
 mangrove, *Merguia rhizophorae*, semi-terrestrial. 7783
 mangrove, Phycomyces, Brazil. 7583
 mangrove, plant growth, Australia. 7596

Swarming, (see also Aggregations)

- of *Autolytus*, role of light. 2604

Sweden,

- coast, pollution. 3160
 distribution and dispersal of Talitridae. 1276
 Lake Mälaren and Lake Hjälmaren, heterotrophic bacteria. 1808
 Lake Vättern, benthos. 1683
 Lake Vättern, distribution of Oligochaeta. 1194
 marking *Salvelinus alpinus*. 2985
 Öresund, pollution effects on benthos. 1696
 upstream movements of insects. 1963
 West coast, pilidium larvae. 2600

Swimbladder,

- Argentina spp., Peru. 8898
 caudal prolongation. 2955
 changes in gas composition during hypoxia, *Mugil cephalus*. 9037
 gas content, *Coregonus*. 2967
 lactic acid production by gas gland, *Lepomis macrochirus*. 8174
 lactic acid secretion, *Sebastodes miniatus*. 4429
Macragnathus aculeatus. 7402
 morphology. 3602
 respiratory effect, *Polypterus senegalus*. 3698
 retention of gas, hybrids, *Salvelinus*. 5303
 skull connections, Megalopidae. 5272
 ultrastructure, Pisces. 3682

Swimming,

- ambivalent behaviour, *Reinhardtius hippoglossoides*. 7417

- Gyrinidae, wave-making. 1953
 oxygen consumption, *Liza macrolepis*. 3693
 planktonic Crustacea. 3717
 Plantanista gangetica. 8832
 sustained in larvae of *Perca* and *Stizostedion*. 449
 thrusts of heterocercal tails, *Heterodontus*, *Squalus*. 3598

Swimming baths, continuous water flow, hygiene. 1721***Swingleus polyclithroides* gen. et sp. n.,** *Fundulus grandis*. 4860**Switzerland,**

- Geneva, collections of *Vaucheria*. 3815
 Lake Constance, hydrobacteriology. 1699
 Lake Lucerne, latest development. 3089
 new *Echinogammarus*. 3390
 Zürich, Amphibia population. 2066

Sycon raphanus*.** 6882**Syllidae, presence of collagen in proventriculus.** 3977Syllis amica*, 3977**

- cephalic and caudal regeneration; dedifferentiation. 659

Syllis gracilis*.** 6926**Sylt, Island of, ecology of Gastrotricha.** 1188Symbiodinium microadriaticum*,**

- symbiotic relationship with *Cassiopea* sp. 3917
 taxonomy, ultrastructure. 4748

Symbionts,

- Caranx hippos*, hermit crab. 6493
Crambe crambe and lamellibranchs, Mediterranean. 6886
 cryptomonad in *Cyclotrichium meunieri*. 2537
Dulichia, *Strongylocentrotus*. 3389
 endosymbionts of *Paramecium aurelia*. 3893
Heteromysis, Syllidae, Caribbean Sea. 7770
Isostichopus badiionotus with *Scambicornus sculptus* sp. n., Caribbean Sea. 6951
 Metazoa. 7614
 new species, Protozoa in frogs, Ohio. 7623
 nitrogen fixation by *Gunnera-Nostoc*. 1756
 oxidation ponds. 3765
Paramecium aurelia. 3896
Phoronis australis, *Cerianthus*, Indo-Pacific. 7927
Platymonas and *Convoluta*. 2518
 prosobranchs and corals. 3325
Scambicornus with Holothurians, Caribbean. 6951
Symbiodinium microadriaticum and *Cassiopea* sp. 3917
Urceolaria kozloffii sp. n., Brachiopoda. 7651
 zoochlorellae, *Plactopecten magellanicus*. 4729
 zooxanthellae, assimilation of products by coral reef. 7676
 zooxanthellae, Coelenterata. 7668
 zooxanthellae, *Polycanthus*. 3330
 zooxanthellae, Tridacnidae, Pacific. 4730
 zooxanthellae, *Viguieriotis edwardsii*. 8479

Sympasiphaea annectens*, distribution, Atlantic.** 8604Sympetrum*.** 7014***Sympetrum fonscolombi*, new to Romania.** 711***Symphoresis*, *Tokophrya wenzeli* sp. n., Arachnidae.** 6837***Symphyonemopsis katniensis* gen. et sp. n.,**
(Myxophyceae). 532***Symplegma viride*.** 7139***Symploca codiformis* sp. n., Tyrrhenean Sea.** 5641***Sympodomma hatagumoana* sp. n., Sagami.** 4089**Symposia, salt and brackish inland waters.** 3120***Synandwakia hozawai*, described.** 1169**Synaprosomes, octopus.** 4170**Synapse, giant, synaptic current in *Loligo pealei*.** 2026

- Synartinskia belcheri* sp. n. 6154
Synchaeta. 4492
Synchaeta pectinata. 6915
Synchaeta vorax. 7688
Syncoryne decipiens. 3875
Syndesmis antillarum, taxonomy. 2592
Syndesmis echinorum, from echinoderm. 7116
Syndesmis franciscana, nutrition and chemical composition. 2592
Synechococcus. 4605, 5504
Synechocystis aquatilis, effect of cultivation conditions on growth. 3797
Synedra acus, extracellular release of organic matter. 25
Synedra ulna. 6742
Synelmis klatti. 3959
Synergasilus. 4370
Syngnathidae. 5427
Syngnathiformes, taxonomy. 5427
Syngnathus longirostris. 5427
Syngnathus serratus. 5427
Synodontidae. 7663
Synodus intermedius, parasitism by *Acompsoccephalum tortum* gen. n., Bermuda. 8484
Synonyms, see Taxonomy.
Synorichthys, distribution, Triassic, USA. 6588
Synthetic efficiency, in the wild type and growth mutant of *Ulva mutabilis*. 1063
Synthetics, teflon blockage, spiral cord, regeneration, *Carassius auratus*. 8130
Synura. 4508
Synura petersenii,
 isogamy. 8324
 sterols. 1769
Syphacuturis obubra. 7693
Syracosphaera carterae. 4620
Syracosphaera pulchra. 3812
Systellapsis. 8560
Systematics, see Taxonomy.
Systems analysis, *Limulus*, retina. 8638
- T**
- Tabellaria fenestrata*, distribution, Untersee and Obersee. 5496
Tachdus, new to Belgium. 671
Tachysurus dussumieri, albinism, India. 4382
Taeniacanthus canthigasteri, parasite of *Canthigaster rivulata*. 165
Taenioconger longissimus. 9014
Taenioma spp., distribution, Venezuela. 5753, 6794
Taeniomembras, meristics. 2338
Taeniomembras microstomus, salinity tolerance and osmoregulation, Australian salt lakes. 4478
Tagging,
 Anoplopoma fimbria, California. 6491
 Atlanto-Scandian herring. 5241
 Busycon canaliculatum. 4115
 comparison, *Salmo* spp. 3622
 Crangon crangon. 686
 Delphinapterus leucas in the Canadian Arctic. 789
 effect of fin-clipping on *Salmo gairdneri*. 859
 Embiotocidae, California. 3656
 English sole, British Columbia. 6575
 growth and annuli of jaw-tagged *Salmo*. 858
 gun, flatfish. 8050
 herring industry, North Sea. 5246
 Homarus americanus. 6022, 7772
 Homarus gammarus. 8582
 juvenile mackerel. 8161
 Melanogrammus aeglefinus. 8147
 micro-tags, salmon. 8266
 Mycteroperca microlepis, *Lutjanus campechanus*. 5403
 Oncorhynchus kisutch. 4324
 Oncorhynchus masou, Japan Sea. 7280
 Pacific halibut, viability. 4386
 Parophrys vetulus, California. 5463
 Phoca vitulina, Puget Sound. 4262
 Pollachius virens, Norway waters. 5379
 reaction of plaice to transplantation. 6579
 reaction of *Pleuronectes*. 9017
 recapture, smolt. 8896
 recovery estimates, Pisces, Iowa. 6321
 Salmo gairdneri. 8923
 shrimp. 2697
 Squalus acanthias, North America, Europe. 5219
 Theragra chalcogramma, Japan. 8153
 Taiwan Straits, Mollusca, radulae. 1973
Talitridae, influence of temperature on sun-compass. 4947
Talorchestia brito,
 distribution, taxonomy, biology. 6051
 ecology, Norway, Morocco. 6993
Tamoya. 4834
Tanaidacea. 7739
 evolution. 4972
Tanais cavolinii,
 cephalothorax. 4972
 occurrence of, Brazil. 5990
Tanypus. 5530
Tanystylum cavidorsum. 8634
Tanytarsini, larval ecology, Finland. 7820
Tanytarsus, water level effect, Lake Kariba. 4100
Tanzania,
 Eubranchidae and Aeolidiidae. 1985
 Lake Victoria, geology. 2949
 marine algae. 3254
Tapes decussatus, biometric observations, France. 4165
Tapes philippinarum,
 metabolism of herbicides. 3480
 metabolism of PCP. 5590, 5591
Tardigrada. 5529, 7116
 Batillipes gilmartini sp. n., California. 3433
 Central West Africa. 2734
 of India. 2733
 Stygarcetus bradypus, larvae. 3434
 Vietnam. 2735
Tarhops elegans sp. n. 7412
Taricha, olfaction. 2860
Taricha granulosa. 6223
 Marion Lake, B. C. 3523
 unusual aggregation. 4243
Taricha torosa, ultrastructure of pars distalis and interrenal. 6270
Tarletonbeania. 8039
Tarpon. 5272
Tarsonemida, evolution. 4994
Tarsonemoides limbatus sp. n., France. 4994
Tasmacetus. 6318

Tasmania,

first record of *Urolophus paucimaculatus* and description of *Brachaluteres wolfei* sp. n. 925
records of *Patiriella regularis* and *Astrostele scabra*. 279

Taste, oily, *Salmo gairdneri*. 2430

Taurulus bubalis. 5404

Tautoglabrus adspersus. 5399

Tawera spissa, Stewart Island. 4527

Taxis,

phototaxis, *Cololabis*. 8202

phototaxis, pineal organ control, *Salmo gairdneri*. 8108

Taxometric maps. 3181

Taxonomy, (see also Classification, New species) 5601

Acanthopleuroceras, Ammonoidea. 7095

Acestrorhynchini. 5316

Acontiphorus antennatus. 4894

Acrocirridae fam. n., (Polychaeta). 2602

additions to *Chlorodesmis*. 1777

Aeolis camtchatica. 7037

Agnesiidae. 4199

Agrobacterium spp. 590

Alepocephaloidea. 5230

algae. 6723

Alona bicolor. 2623

Ampelisca excavata. 7754

Amphibia, Afghanistan. 5067

Amphiuridae. 5041

Anabaena variabilis. 11

Anchoa walkeri sp. n., Pacific. 3604

Ancylidae. 8647

Ancyrocephalus. 8490

Ankistrodesmaceae. 8325

Anomia retusa. 7135

Anomura, Waltair Coast. 6978

Anseropoda lobiancoi. 2823

Antarctic yeasts. 3860

Antarctosaccion, *Monostroma*, *Porphyra*, Antarctic. 4674

Anura. 288

Aphanocladia, Portugal. 7537

Apistonema, *Syracosphaera*, *Hymenomonas*. 4620

Aponogeton, Australia. 4782

Appendicularia, Red Sea. 7937

Archannelida. 4872

Arctocephalus forsteri, Australia. 3547

Arthrospira neapolitana proposed to replace

Arthrospira brevis (Kutzing) Prouet. 526

Asellidae. 8568

Asterias hispidus. 5046

Askenasyella randhawai sp. n. 549

Astronesthes cyaneus, Arabian Sea. 8093

Atherina. 3040

Atherina mochon, Dutch coast. 6550

Atractotrematidae, *Haploporidae*. 5880

Auxis spp., electropherograms. 6492

bacteria. 7569

bacteria, *Crassostrea virginica*. 3462

Balanus tintinnabulum clippertonensis, Mexico. 4903

Batillipes gilmartini sp. n., California. 3433

Belonidae. 5438

benthic heterotrophic bacteria. 5772

Blicca, *Abramis*. 8128

Bomolochidae, Caribbean. 6943

boring algae. 2492

Brachiopoda. 7129

Bryozoa. 6185

Bryozoa, burrowing. 2834

Bryozoa versus Ectoprocta. 280

Bugula. 5058

Callianassidae, Japan. 4916

callochiton castaneus, *callochiton inornatus*. 4174

Candona, Sudan. 7000

Careproctus cameliae. 8855

Caristiidae. 4445

Castradella otophthalma. 8494

Catepaguroides, Saint Laurent. 7807

Cecina manchurica. 1979

Ceramiaceae, Argentina. 4705

Ceramiella. 4709

Cestopagurus, Saint Laurent. 7807

Cetomimus. 4446

character weighting. 3179

Chondracanthidae. 5966, 5967

Chrysomeridaceae. 3215

Chrysomeris, *Giraudopsis*. 3215

Cirsomphalus. 7036

Cladophora spp. n. 2513

Cladophora catenata. 2514

Clausocalanus. 154

Clinostomum giganticum. 8495

Clupea. 5161

Clupeiformes. 8083

Clypeoniscus. 687

Cobitis. 6451

Collothea, Czechoslovakia. 4865

Colpidium kleini sp. n. 5835

Copepoda, India. 7724

Copepoda, Japan. 3353

Coregonus baderi, Brazil-Surinam. 6453

Corixidae, Netherlands Antilles 7002

Corydoras spp., Surinam. 7312

Coryphella fusca. 7037

Coryphella verrucosa. 2746

Cottus gobio, *C. poecilopus*. 433

crabs, New Zealand. 8563

Cristallichthys cameliae, Pacific. 8855

Cristivomer, Lake Superior. 4316

Cryptocystidea. 7934

Cryptospira ventricosa and *Cryphospira glauca*. 2747

Ctenocladus, British Columbia. 8354

cubomedusae, Japan. 4834

Culex albirostris. 4983

Cyanophyceae. 3198, 3239, 8290

Cyathocrinites, *Temnocrinus*. 7112

Cyclocoelum spp. 5852

Cyclops abyssorum f. *tatricus*. 1885

Cyclotella iris. 7497

Cyprinidae, Canada. 4975

Cypris monstifica, *Ilyocypris ambigua*. 3418

Cytheridae, Europe. 6999

cytotaxonomy, *Lymnaeidae*. 3443

data. 3177

Demeijerea. 8622

Dermatobranchius walteri, Spitzbergen. 7038

Diaptomus intermedius sp. n., Saskatchewan. 4896

Diatomaceae, Indian Ocean. 5665

Didemnidae, Glenan Archipelago. 4208

Dinema semiparasiticum sp. n., Lithuania. 6844

Dinema spp. n., Lithuania. 6841

Dinema ocelli gen. et sp. n. (Flagellata) parasite,

Lithuania. 6847

Draparnaldia. 4668

Drupella. 5004

Echeneidocoelium indicum, parasite of *Echeneis*

naucratus, Bay of Bengal. 5900

Taxonomy, contd.,

- Echinogammarus spp. n., Italy, Switzerland. 3390
- Eirgos anurus, Florida. 3361
- Ekemblemaria. 7355
- electrophoretic method, Pisces. 6325, 6326
- Enchodus longipectoralis. 7391
- endoparasitic Protozoa, Lake Seliger. 6836
- Engraulidae, Florida. 6389
- Enteromorpha, Korea. 3237
- entomology, Israel. 6067
- Ephemeroptera. 7822
- Ergasilus. 5969
- Esthinascidia herdmani. 7942
- Eubranchius spp. 722
- Eulichthys. 7344
- Euglenoidina. 6849, 6850
- Eustigmatophyceae. 3218
- Euthalenessa. 7704
- Flagellata and Algae, 1925-1957. 2474
- Flagellata and Algae, 1959-1961. 2475
- Flagellata and Algae, 1967. 2476
- Fluviphylax pygmaeus, Amazon. 6555
- fossil Protista. 619
- Galatheididae, Japan. 8557
- Gammarus pulex group. 3395
- Gasterosteus aculeatus, North America. 4452
- Gastrotheca christiani. 6224
- Gelidium caulacanthum. 5743
- generic rearrangement of Scarinae. 906
- Gessnerium mochimaensis gen. et sp. n. 5765
- Glossiphoniidae. 6924
- Glyptotendipes. 8622
- Gobiesocidae, Panama. 3687
- Gobiidae. 4383
- Gobius ephippiatus and G. macrolepis. 893
- Gomphidae, South America. 7001
- Goneplacidae. 1247
- Goniasteridae, Straits of Florida. 6177
- Grandidierella. 6018
- Graptemys nigrinoda, Alabama. 3532
- Habupionovolva gen. n., Prionovolva. 4120
- Halocynthia. 2045
- Hantzschia virgata v. intermedia comb. n. 5674
- Haplochinae, India. 6903
- Helobiae. 5807
- Herpetocypris, Portugal. 8606
- Heteroptera, Netherlands Antilles. 7003, 7004
- Heterotis, Clupisudis. 5269
- Hirudinea, Colorado. 3345
- histogenesis, Cypriniformes. 8931
- Holacanthus spp., Japan. 6499
- Hyalinoecia, North America. 6927
- Hyalinoecia, North Atlantic. 5938
- Hyphoporus. 1957
- Hypocamptus. 157
- Indostomus paradoxus. 6563
- Inoceramus, Cretaceous, Holarctic. 7883
- intraspecific differentiation, Oncorhynchus keta. 4323
- Karreria. 5720
- key to littoral European Enchytraeidae. 137
- Laminariales, Mediterranean. 5734
- Lampadena urophaos, Atlantic Ocean. 4456
- Lampetra planeri. 6359
- Lampetra planeri, Eudontomyzon mariae, Czechoslovakia. 4287
- larvae, Odonata. 4988
- Lastroichthys longipectoralis. 7391
- Latirus varai sp. n., Cuba. 7864
- Leanira spp. 8530
- Lejeunaceae. 80
- Leptotintinnus, type species. 6865
- Leptodiscinae. 588
- Liostephania. 5662
- Lirceus fontinalis. 2649
- Lycophora. 7275
- Lyrodon kefersteini. 7084
- Lysmata rathbunae sp. n., North Atlantic. 7781
- Macoma, British Columbia. 5021
- Macroporella, Salpingoporella, Pianella. 4673
- Madreporella, Banyls-sur-Mer. 7664
- Malapteruridae. 3646
- Mallomonas. 5675, 5677
- Margarella and Margarita, radula. 4125
- marine nitrifying bacteria. 5779
- Mayorella spp. 8449
- Megagobio and Microphysogobio. 414
- Megalobrama. 7341
- Megaloptera, Czechoslovakia. 3431
- Mesopodopsis. 6031
- microorganisms with reference to hydrocarbons. 2548
- Micropsectra, Europe and North Africa. 8627
- Microsporidia. 7500
- mid-European Utricularia. 1134
- Mitra lopei. 5007
- Mixophyes. 2073
- Molva dypterygia. 3018
- Mononema perpendiculare sp. n., Lithuania. 6853
- Murex lotorium. 7048
- muscle systems of benthic polychaetes. 8522
- Mysidae and Gammarus spp, Baltic. 1259
- Naticidae, Japan. 1991
- Natrix, Mexico. 6298
- Nematoda, South America. 7689
- Nippon, Lates, Percichthys. 438
- Notropis ariomnus, N. telescopus. 880
- numerical, corals, Hawaii. 8465
- numerical, errors in homology. 5602
- numerical, flexibacteria. 1104
- numerical, heterotrophic bacteria, Chlorella. 3298
- Ocypode, Migiurtinia. 4946
- Odonata. 7828
- Odontophrynus occidentalis. 5093
- Oncholaimidae. 7694
- Oncorhynchus nerka, Alaska. 6413
- Oncorhynchus nerka by scales. 6417
- Opalina, Ohio. 7623
- Ophiuroidea, Washington State and southern BC. 756
- Oreoleuciscus, USSR. 6475
- Orthopsyllus, Norfolk. 3363
- Oscillatoriaceae. 1027, 3209
- Oscillatoria redeki Van Goor. 1028
- Paramegalodus gen. n. 6151
- Paromalostomum. 128
- Pelagohydra mirabilis. 8473
- Pelagothurioida. 7115
- Penaeus granulatus. 7799
- Penaeus laryae, North America. 6043
- Periclimenaeus, 10 new species. 1934
- Peridiniopsis borgei. 1798
- Phaeophyceae, eastern Gulf of Mexico. 54
- Phaeophyceae, Finland. 6782, 7530
- Philinoglossa marcusii, British Solomon Islands. 4131
- Philippia, Indo Pacific. 3449
- Phocidae. 7217

Taxonomy, contd.,

- Phoronidea, 6187
 Phoronis australis, 7927
 Phoronis spp., Sweden, 7928
 Phoronopsis albomaculata, 2837
 Phoronopsis californica, 2836
 Phrygiopilus, Guatemala, 4962
 Physa striata complex, 2768
 phytoplankton, Germany, 7425
 phytoplankton, Pacific Ocean, 5494
 Pisces, Argentina, 8898
 Placobdella, 6923
 planktonic Copepoda in an Indian estuary, 1223
 Planodasyidae fam. n. (Gastotricha), India, 6913
 Platysiphonia decumbens sp. n., Washington, 3272
 Pleurodytes, 217
 Poecilidae, Caribbean, 3690
 Pogonophora, 6188
 Poljanskina, 6866
 Pomacentrus ophorus, Caribbean, 4425
 Porifera, 6868, 6870, 7656
 Porifera, New Zealand, 4824
 Porifera, Sclerospongiae, 6871
 Porphyra endivaefolium, Antarctic, 4674
 Potamolepidae, Africa, 3323
 Potamophloios, 6869
 Poterioochromonas malhamensis comb.n. 3811
 Prosimulium, 6088
 Protoraphidaceae fam. n. 5682
 Protozoa, endosymbionts of frogs, Ohio, 7623
 Pseudoemblemaria, 7355
 Pseudoanemonia tentacula gen. et sp. n., New Zealand, 3280
 Pseudogloiophloea, Ishige sinicola, 4722
 Pseudomonadida, use of fluorescent antibody technique, 5782
 Purpurellus, 2771
 Pyrrhophyceae, 6797
 Radix hamadai, 1998
 Raeta spp. 264
 Rana esculenta, 2061
 Rana fasciculispina sp. n., Thailand, 8760
 Rana macroglossa, 7170
 Rana maculata, 7170
 relationship of Rhizosolenia hebeta and R. styliformis, 2499
 revision of Austroperlidae, 707
 Rhabdopleura compacta, 2845
 Rhecias armiger, 7421
 Rheocricotopus, Europe, 3430
 Rhizocephala, 175
 Rhodomelaceae, 8388
 Romanian Hydraenidae, 1956
 Romeis gen. n., Cythereis rivulorum, 6999
 Sagitta megalophthalma sp. n. 2839
 Salmincola, 4010
 Salmonidae, canned species, 6402
 Salmoniformes, 3617
 Salpa democratica Forsskål 1775 validated and designated type sp of Thalia Blumenbach, 1798, 761
 Salpingoeca spinifera sp. n., Arctic, 4747
 Sardinella, Indo-Pacific, 4347
 scales, Oncorhynchus nerka, 3613
 Sciaenidae genera n. 429
 Scopelus spinosus, 7420
 Scorpaenidae, Atlantic, 5412
 Scytothamnus australis, 1788
 Semisulcospira, Japan, 3453
 septibranch spp. n. 731
 shell characters, Diatomaceae, 5643
 Siboglinum, 6188
 Siganus, 5416
 Sigara, Australia, 4979
 significance of genital complex in Euchaetidae, 1889
 Simuliidae, British Isles, 7821
 sinistral flounders, Japan, 7412
 snakes, 8804
 Sparidae, 2287
 Sphaenorhynchus aurantiacus, 3521
 Sphaeridiotrix compressa, 8323
 Sphaeriidae, 5013
 Squalidus, 419
 Squamariaceae, Japan, 3284
 Stammeridium nom. n. 5850
 status of Spheroides spp. 947
 Stigeoclonium, 51
 Stigonematales, 3209
 strains, Chlorella, 8342
 Stygarctidae, 3434
 Subsilicea fragilarioides gen. et sp. n. 5686
 Symbiodinium microadriaticum, 4748
 Syndesmis antillarum, 2592
 Syngnathiformes, 5427
 synonymy and variability of Natrix tessellata, 782
 synonymy of Halimeda copiosa and H. hederacea, 2515
 synonymy of Scoloplos, 3974
 Talorchestia brito, 6051, 6993
 Terebratulina, 7135
 Teuthis, 5416
 Thalassiosira, Cyclotella, Coscinodiscus, 5687
 Thalassocyon, 2000
 thermostability of isolated muscle used to determine relationship between S. marinus and S. mentella, 446
 Tiluropsis, Leptocephalus, 4465
 Tintinnidium, type species, 6865
 Tornus subcarinatus synonymous with Cyclostrema miranda, 2748
 Trematocarpus and Dicurella, 1804
 Tremogasterina, Indian Ocean, 6189
 Trichiurus, Lepturacanthus, India, 4435
 Trichomyetae, France, 6814
 Tricladidae, Tyrrhenian Islands, 4850
 Tritoniopsis elegans, Japan, 3458
 Turridae, 4123
 type spp designation, Xiphias platypterus, 5395
 type spp of Purpura and Muricanthus, precedence of Thaididae over Purpuridae, 728
 type specimens, Pisces, 7235
 Ulothrix subflaccida, France, 3247
 ultrastructure, Saprochaete saccharophila, 3307
 Ulva arasakii sp. n., Japan, 6775
 Ulvales, 6750
 use of radula, Conidae, America, 6107
 Vaucheria, central Europe, 6747
 Vaternio verrens, 7421
 Xanthidium regulare, 4631
 Zelandobius, 4992
 zooxanthellae, Cliona viridis, 3322
 Taypleuridae fam. n. (Copepoda), fish parasites, 166
 Tayuva ketos juva, 8642
 Tchad, see Chad.
 Tchadorhynchus quentini gen. et sp. n. 7692
 Teaching, ethology, use of aquarium, 3028
 Tealia felina, feeding behaviour, 7677

Techniques, radionuclide tracer technique for estimating food consumption in *Lethocerus*. 705

Teeth,

- dental formulae, *Batrachia*, Madagascar. 3509
- development, *Chondrichthyes*. 8878
- origin of enamel organ, *Pleurdeles*. 8757
- pharyngeal, *Gobio gobio*. 408
- replacement paterus, *Caiman sclerops*. 6294
- Spheroides testudineus*. 1650
- ultrastructure of vasodentine, *Urophycis tenuis* 5384
- ultrastructure, *Squalus acanthias*. 4299
- variation, *Odontaspis taurus*, East China Sea. 8882
- vasodentine and mantle dentine in teleost. 4387
- vertebrates. 6362

Tegula pfeifferi,

- egg-membrane lysis. 8669
- lytic activity of egg-membrane. 7055

Tegument, *Tylocephalum*. 2593

Teleostei,

- biosynthesis of 18-hydroxycorticosterone, adrenocortical tissue. 7346
- cytophotometry of neurosecretory preoptico-hypophysial system. 8887
- ECG effects by pH. 8079
- embryology. 6452
- endocrine glands. 8888
- energy cost of gill ventilation. 8210
- fatty acids. 5442
- gel filtration of protein extracts. 7361
- histomorphology of oesophagus, India. 7343
- interphase prolongation. 8084
- larvae, Brazil. 8076
- light-induced potentials spread. 6378
- myodome. 6376
- osmoregulation. 5166, 5404, 8888
- prolactin effects. 6377
- saturation of S-potentials of retina. 6379, 6380
- spawning of 30 spp in Gulf of Gascony. 817
- staining of hydrochloric acid in gastric tubules. 7354
- statistical behaviour of discontinuous variable group. 7307
- vasodentine and mantle dentine. 4387
- yawning behaviour. 8980

Telepsavus costauxi, biochemistry. 1873

Telescopium telescopium, calcium in soft tissues. 6125

Television,

- monitoring of dropping rate, salmon gills net. 3579
- use in investigation of phototactic orientation, *Gyrodinium dorsum*. 5766

Tellina tenuis, ecology and growth, Charente-Maritime coast. 4167

Tellinimera. 7874

Tellininae, South Africa. 2805

Temnocrinus tuberculatus, designation of type species. 7112

Temnopleurus toreumaticus, actin-like protein in eggs. 8723

Temora longicornis. 9042

Temperature,

- acclimation and salinity in *Callinectes sapidus*. 1903
- adaptation at protein level, *Lebistes*, *Cyprinus* and *Perca*. 4309
- adaptation, *Chlorella*. 8348
- algae. 7487
- Alosa sapidissima*. 6381
- behaviour effects. 4798
- body in *Patella*. 2811
- chromatophore effect, *Ocypode macrocera*. 4945

control apparatus, used in flagellar regeneration experiments. 36

Cryptocotyle causing lowered heat tolerance in *Littorina*. 724

Cyanophyceae, Iceland. 4605

dependence of metabolic rate in animals. 681

effect on abundance of *Hommarus americanus*. 190

effect on algal and diatom flora. 2479

effect on biosynthesis in *Chlorella*. 3826

effect on blood group agglutinins in *Ictalurus*. 873

effect on *Cinclus mexicanus*. 8820

effect on development, *Cyprinus carpio*. 4363

effect on dilation capacity, frog heart. 7982

effect on distribution and control of *Lymnaea* and *Bulius*. 723

effect on distribution of *Clymella torquata*. 2607

effect on distribution of *Potamopyrgus antipodum*. 1997

effect on embryology, *Perca*, *Lucioperca*. 5405

effect on enzymes of aquatic poikilotherms. 1919

effect on eye development, *Rana pipiens*. 2858

effect on fatty acid composition, *Carassius auratus*. 6444

effect on feeding rate, *Asterias forbesi*. 8710

effect on flora, Maryland. 4778

effect on gaffkemia. 1252

effect on gonad development in *Gasterosteus*. 929

effect on growth, *Dictyosphaerium*. 4612

effect on growth, longevity and egg production in *Chirocephalus*. 666

effect on heat tolerance in *Diogenes*. 688

effect on immunology, *Cyprinus carpio*. 2997, 2998

effect on instars, *Aeschna mixta*. 8617

effect on intestinal epithelium, *Oncorhynchus kisutch*. 6406

effect on life cycle and growth of *Asellus*. 1232

effect on metabolism, *Umbra limi*. 7298

effect on muscular response, frog. 8797

effect on *Mya arenaria* amino acids. 4155

effect on N_2 excretion in *Lepomis macrochirus*. 899

effect on O_2 consumption in *Cirripedia*. 1892

effect on *Oscillatoria rubescens*. 476

effect on postlarval penaeids. 2688

effect on potassium influx, *Elodea densa*. 4784

effect on rate of digestion, *Ictalurus punctatus*. 5341

effect on reproductive behaviour of *Nerilla*

antennata. 3970

effect on respiration, *Salmo gairdneri*. 3621

effect on respiratory enzymes of *Carassius*. 865

effect on serum protein components, *Fundulus*

heteroclitus. 8205

effect on sexual reproduction, *Dugesia tigrina*. 8499

effect on sun-compass, *Talitridae*. 4947

effect on tuberous organs, *Gnathonemus*. 7398

effect on ultrastructure, *Chlorogloea fritschii*. 8303

heat summation and catch in *Penaeidae*. 2665

Marisa cornuarietis, relation to O_2 consumption. 1990

optimum, for faecal coliform test. 500

photoperiod effects on spermatogenesis in *Plethodon*. 767

population dynamics, *Brachionus calyciflorus*. 5925

recorder in situ. 2449

regulation, *Amblyrhynchus cristatus*. 225

regulation behaviour, *Rana catesbeiana*. 4220

relation with filtering rate and body size, *Daphnia*. 1880

selection by *Carassius auratus*. 6447

Temperature, contd.,

- sensitivity, intertidal fishes. 4404
- synchronized culture, Euglena. 1795
- thermal adaptation of photosynthesis in *Chlorella* and *Pseudochlorella*. 1048
- thermal exchange, *Tilapia mossambica*. 6530
- thermo-resistance of muscle, invertebrates. 8429
- variation, tropical water course, Congo. 3728
- water, effect on current formation, equator. 6641
- water, isotherm maps for tuna fishery, New South Wales. 6535

Temperature tolerance,

- acclimation. 8077
- algae, USA, Pacific coast. 5619
- Amphibia, Australia. 8733
- Bufo marinus*, South Florida. 5081
- Ciliata. 6831
- Cirripedia. 4018
- Clymenella torquata*. 3344
- Copepoda. 7723
- Copepoda, Chesapeake Bay. 5505
- Crenobia alpina*. 6899
- Crustacea, Lake Chad. 8540
- Cryptocotyle causing lowered heat tolerance in *Littorina*. 724
- Cyanidium caldarium*. 7491
- Cyanophyceae. 3801
- Diogenes. 688
- Diopatra cuprea*. 3344
- diurnal rhythms, *Acris crepitans*. 3502
- embryos and larvae, *Mulinia lateralis*. 7889
- Eupleura*, *Urosalpinx*. 8654
- freezing, *Mytilus edulis*. 8678
- Fundulus heteroclitus*. 6557, 7393
- larvae, *Mytilus*. 3469
- Menippe mercenaria*. 6030
- Mysis relicta*. 6032
- Podon polyphenoides*. 7815
- preferred temperatures, *Poecilia reticulata*. 7414
- Salmonella*, *Escherichia coli*. 7572

Tenagosa. 7002

Tennessee, *Planophila terrestris* sp. n. 571

Tentacles,

- abnormalities, *Pachydrobia pellucida*. 4128
- haemolytic properties, *Chironex fleckeri*. 4837
- histology, *Patella vulgata*. 7050
- ultrastructure, *Cardium edule*. 7879
- Vaginulus borellianus*. 2781

Tentacle apparatus, red coral, *Corallium rubrum*, and feeding role. 5867

Tentaculitidae, Devonian fossils, Alaska. 6163

Tenuipteria. 7874

Teratologies,

- Abramis blicca*, 2 mouth openings. 5314
- bicephaly, *Prionace glauca*. 5214
- conjoined twins, *Brachydanio rerio*. 6442
- effect of fish excreta, *Rana esculenta*. 7166
- pearl formation, abnormal, in *Pteria* (*Pinctada*) *martensii*. 747
- shell, in *Pteria* (*Pinctada*) *martensii*. 747

Terebratalia transversa, 7651

- growth and size distribution. 3499

Terebratula wilsoni. 7129

Terebratulida, mesodermal endoskeleton. 4190

Terebratulina, 7135

- larval development. 2841
- taxonomy. 7135

Teredo navalis, 6152

- attacks, Danish waters. 4166

Terenochiton inquinatus, Stewart Island. 4527

Terestricythere ivanovae gen. et sp. n., (Ostracoda), Kuril Islands. 7814

Tergula funebris, food of *Pisaster*. 4133

Terminal oxidase, mitochondria, *Euglena gracilis*. 3844

Terminology,

- freshwater biotypes. 5525
- Russian names of organisms. 7479

Terpenoids, isolation of 3 new holothurinogenins. 752

Terranova decipiens, larvae, Nova Scotia. 4866

Terrapene carolina. 8011

Terrestrial environment,

- destruction of soil microflora by seawater flooding. 5796
- ecology, amphibious clinid, *Mnierpes macrocephalus*. 6505
- mangrove swamps, semi-terrestrial *Merguia* rhizophorae. 7783
- Terestricythere ivanovae* gen. et sp. n., Kuril Islands. 7814

Territorial behaviour, *Lottia gigantea*. 5006

Test, regeneration in *Discorbis*. 98

Testacea,

- adaptations to biotype. 8443
- communities in Bryophyta. 108

Testacea microscopica, Vienna 1798, correct authors. 627

Testacella. 7019

Testis,

- compensatory hypertrophy, *Bufo melanostictus*. 8752
- exonuclease, *Oncorhynchus tshawytscha*. 5277

Testudo graeca, epileptic focus in forebrain. 8812

Tethya. 6884

Tethyum aurantium. 7618

Tetilla. 6884

Tetracrita. 4900

Tetracrita purpurascens, embryology. 173

Tetracrita rosea, embryology. 173

Tetracrita (Tetracrita) squamosa rufotincta. India. 174

Tetracotyle. 4370, 4855

Tetracotyle xenotodoni sp. n., parasite in *Xenotodon* *cancilla*. 8506

Tetractinomorpha. 6884

Tetracystis excentrica, ultrastructure cytochemistry during zoosporogenesis. 4697

Tetragona. 5551

Tetragonurus cuvieri, Angola. 7378

Tetrahymena, 3726

- DNA synthesis in nuclei. 7653
- effect of shock on respiration and intracellular ATP concentration. 1159
- growth parameters in normal and actinomycin-prolonged cell cycles. 5852
- inhibition of cilia regeneration by colchicine. 1161
- nucleic acid synthesis inhibitors. 6861
- regulation of glycogen metabolism. 8454
- reversal of temperature-induced cell-surface deformation. 4821

Tetrahymena pyriformis,

- active hybrid 80S particles formed from ribosomal subunits. 111
- antimitotic agents and macronuclear division. 3899
- basal bodies of oral apparatus. 8455
- biosynthesis, cortical proteins. 3900
- contractile proteins. 628
- cortex. 1162
- DNA kinetics. 2569
- DNA synthesis in synchronized culture. 1158
- effect of colchicine and Colcemid on macronuclear

Tetrahymena pyriformis, contd.,

- division, 1157
- effect of colchicine on culture, 8453
- effect of pressure on synchronous cultures, 1147
- electron-transport chain, 1146
- haemadsorption reaction with measles virus, 2575
- hydrogen elimination during the conversion of cholesterol, 1148
- location of arginine kinase in cilia, 6862
- mating type inheritance, 4820
- phosphatidylcholine biosynthesis, 4822
- radiation sensitivity, 1820
- subribosomal particles, 7648
- synchronization of oral development, 6863
- tetrahymanol biosynthesis, 7647
- toxicity of rubratoxin B, 7649
- water expulsion vesicle, 1837
- Tetraodon palembangensis**, parasitism by *Dermocystidium granulosum* sp. n. 6812
- Tetraodontidae**, toxicity, tissues, 9016
- Tetraodontiformes**, toxins from eggs, 6589
- Tetraploidy**, parthenogenetic, *Artemia* DNA, 663
- Tetrapoda**, neurohypophyses, similarity with tetrapods, 6437
- Tetrapterus**, 3660
 - migrations, 5424
- Tetrapturus albidus**, 5424
- Tetrapturus audax**, 5424
- Tetraselmis**, 7087
- Tetraspora**, cytoplasmic microtubules, 3246
- Tetrasporidium**, Pakistan, 7525
- Tetrodon oblongus**, 7342
- Tetrodotoxin**, effect on Na transport, frog skin, 2869
- Teuthis**, taxonomy, 5416
- Teuthis javus**, 5416
- Teuthowenia**, 7897
- Texas**, possible occurrence of *Sepia* at Galveston, 265
- Thaerodonta**, 7130
- Thaididae** Suter 1913, given precedence over *Purpuridae* Broderip 1839, 728
- Thailand**, culture of *Clarias* spp. 3629
- Thais**,
 - predation of *Balanus*, 5982
 - type sp. 728
- Thais chocolata**, precursors and metabolites of choline esters, 6106
- Thais lamellosa**, effects of starvation on respiration and nutrition stores, 6126
- Thais lapillus**, 5589
 - ecology of exposed populations, 6122
 - effects of detergents, 1005
 - function of operculum, 4134
- Thala**, spp of eastern Pacific, 237
- Thalamita**, 5549
- Thalamita crenata**,
 - carbohydrases, 1977
 - culture of ovaries, 7809
- Thalamita gurjanovae** sp. n. 6985
- Thalamita kotoensis** sp. n. 6985
- Thalamita starobogotovi** sp. n. 6985
- Thalamitakagosimensis bacboensis** subsp. n. 6985
- Thalassia hemprichii**, 5549
- Thalassia testudinata**, distribution and significance on deep sea floor, N. Carolina, 83
- Thalassia testudinum**,
 - associated Diatomaceae, Florida, 5644
 - floral morphology and anatomy, 84
 - survival and growth when transplanted under artificial conditions, 85

- Thalassiomycetes**, further studies of Lindra, 603
- Thalassiosira**, 5488, 5643, 8229
 - ultrastructure, 5687
- Thalassiosira dubia**, 3803
- Thalassiosira fluviatilis**, 3709, 5504, 5672
 - phosphorus content and growth rates, 4622
- Thalassiosira rotula**, 5670
- Thalassocyon**, taxonomy, 2000
- Thalassomyces**, marsupii, parasite, *Parathemisto*, 5768
- Thaleichthys pacificus**, otter trawl fishery, Columbia River, 6440
- Thalenessa stylolepis**, 8522
- Thalestridae**, Bahamas, 669
- Thalia Blumenbach** 1798, designated type sp: *Salpa democratica* Forsskål 1775, 761
- Thalia democratica**, distribution, 4210
- Thallus**, *Pseudogloioiphloea okamurai*, 1085
- Thamnophis**, acclimation, temperature, effects on physiological responses, 8813
- Thanatostrea polymorpha**, gill disease, 7088
- Tharyx**, 5551
- Thecata**, Cuba, 8390
- Thelohania bicortex** sp. n. 3890
- Thelohania trichostegiae** sp. n. 3890
- Thenea**, 5551
- Theodoxus fluviatilis**, 2 spp of *Thigmotrichia*, 112
- Theragra chalcogramma**,
 - fishery biology, Japan, 8153
 - morphology, Japan, 8152
 - spawning, Bering Sea, 8979
- Theristus** cf. *bipunctatus*, 7690
- Theristus** (*Theristus*) *denticulatus* sp. n. 5921
- Theristus** (*Trichotheristus*) *psammoides* sp. n. 5921
- Thersitina gasterostei**, parasitic on *Gasterosteus wheatlandi*, 167
- Thespesiopsyllus paradoxus**, western Norway, 5979, 6953
- Thetys vagina**, *Ocythoe tuberculata*, 3490
- Thiaminase**, in Philippine Mollusca and Crustacea, 4573
- Thiamine**,
 - content, eyes, Amphibia, 7157
 - in German Lake, 1809
- Thigmotricha**,
 - 2 spp from *Theodoxus fluviatilis*, 112
 - general biology, 6864
- Thiocapsa floridana**, 6805
- Thiorhodaceae**, 5786
- Thiourea**, molluscicides, 1972
- Thoracica**, distribution, Japan, 4900
- Thorogobius** gen. n., erected for *Gobius ephippiatus* and *G. macrolepis*, 893
- Thos aureus soudanicus**, 7693
- Thraulodes speciosus**, nymph, 218
- Thraustochytriaceae**, substrate relationships, 7585
- Thraustochytrium**, 7583
 - parasitism by *Labyrinthula*, Baltic Sea, 8420
- Thraustochytrium aggregatum**, 5806
- Thraustochytrium kinnei**, zoospore discharge, 7590
- Thrissocles mystax**, 8156
- Thristes atum**, 8051
- Thryssa vitrirostris**, extension of maxilla, 393
- Thunnidae**,
 - feeding behaviour, Atlantic Ocean, 6539
 - fishery, Angola, 6536
 - long-line fishery, 6537
- Thunnus**, 8189
 - blood pathways in gills, 4307
 - discolouration of frozen meat during defrosting, 7383
 - echo-survey, Indian Ocean, 7384

- Thunnus**, contd.,
 fishing industry, Tropical Atlantic. 5422
 migrations. 5424
 tuna long-line fishery, Japan. 5425
- Thunnus alalunga**, 5424, 7377, 7380
 differences in populations, North and South Hemispheres. 7382
 fishing industry, Atlantic. 8045
 Hawaii. 6540, 6541
 migrations, Atlantic Ocean. 2305
 New Zealand fisheries. 7380
 proteins. 8868
- Thunnus albacares**, 5171, 5426, 6539, 7243, 7377, 7379, 9010
 chromatographic analysis, eye proteins. 5426
 fisheries, Indian Ocean. 2306
 gill dimensions. 916
 migrations, Gulf of Guinea. 4439
 relations to micronekton, eastern tropical Pacific. 452
 swimming depths. 9009
 year classes, catchability, Pacific. 3036
- Thunnus atlanticus**,
 biometry, Rio Grande do Norte. 6542
 feeding, Brazil. 920
 fishery biology. 918
 fishery, Rio Grande do Norte. 6543
 histology of gonads. 919
 length and weight, Brazil. 922
- Thunnus obesus**, 5426, 7377, 7379, 7381
 chromatographic analysis, eye proteins. 5426
 permeability of eye lens capsule to nuclear eye lens proteins. 7381
- Thunnus thynnus**, 5424
 gill dimensions. 916
 preparation of cholesterolized cardiantigen and its value in serodiagnosis of syphilis. 917
- Thuretelopsis peggiana**, culture. 8389
- Thwaitia kotlani** sp. n. 5936
- Thymidine**, incorporation into sea urchin eggs. 7125
- Thymidine kinase**, activity during regeneration, *Dugesia dorotocephala*. 5899
- Thymine**, from DNA, Echinoidea. 7120
- Thynnascaris aduncum**. 3950
- Thynnascaris cornutum**. 3950
- Thynnascaris rigidum**. 3950
- Thyone briareus**,
 intestinal absorption and transport. 2034
 intestinal absorption and transport, sugar transport. 2035
 structure of integument. 7926
- Thyroid**,
 Cichlidae, relation with O₂ consumption. 885
 effect on visual pigments, salmon. 2991
 Notophthalmus, normal and ¹³¹I-treated. 766
 Pleuronectes platessa, iodine. 2344
 seasonal changes in activity, *Pseudemys scripta*. 329
- Thyrsites atun**,
 control of *Hemispora stellata*. 3587
 food. 2289
- Thysanoessa longicaudata**, ecology, North Atlantic. 7430
- Thysanostoma**. 4833
- Thysanoteuthis**. 5222
- Tiaropsis multicirrata**,
 Barents Sea. 3331
 structural features of mass aggregation. 4847
- Tichocarpus crinitus**, polysaccharides. 7545
- Tidal flow**, Glenan Archipelago. 4523
- Tide-pools**, ecological characteristics, Murman coast. 7442
- Tides**,
 artificial, zoniation amongst Trochidae. 6118
 Sea of Japan. 7444
- Tigriopus californicus**, uptake of glycine. 3350
- Tigriopus japonicus**,
 fertility. 5946
 life histories. 5980
- Tilapia**, 3560, 4514, 7437
 aquaculture, eutrophicated lakes, Malacca. 3675
 aquaculture, France. 3674
 aquaculture, hybrids. 3673
 aquaculture, Uganda. 2292
 correlated aggressive and brooding behaviour. 8186
 culture, Lake Kariba. 3031
 distribution, Zanzibar. 3678
 fighting behaviour. 6527
 genetics, Malaysia. 5417
 hybridization. 2297
 influence of season on growth. 2299
 overwintering. 2300
 physiology. 3030
 reproduction, Madagascar. 2296
- Tilapia alcalica**, field studies. 2290
- Tilapia aurea**. 3569
- Tilapia coffea** sp. n., distribution, Liberia. 5418
- Tilapia heudeloti**. 3564
- Tilapia hornorum**, 5417
 sex-determining mechanism. 914
- Tilapia joka** sp. n., Sierra Leone. 2291
- Tilapia leucosticta**, 5532
 testosterone in testes. 2303
- Tilapia macrochir**. 8961
- Tilapia melanopleura**, 3564, 5417
 utilization of food. 2294
- Tilapia mossambica**, 3564, 5417, 6478, 7320
 establishment, California. 3672
 extra-hypothalamic neurones in brain. 7372
 feeding and growth rate. 2295
 glycogen levels, liver. 9004
 production, after pond fertilizers. 2293
 rearing in the laboratory. 3029
 sex-determination. 3676
 sex-determining mechanism. 914
 thermal exchange. 6530
- Tilapia nigra**, histology of testes. 9005
- Tilapia nilotica**, 3564, 3569
 feeding in growth rate. 2295
 growth. 7373
 length-weight relationship, Egypt. 5419
 mono-sex culture. 2301
 O₂ consumption. 912, 4434
 x *T. mossambica*, hybrids. 2298
- Tilapia rendalli**, 6529
 nutrition. 6528
- Tilapia tholloni**, ecology, Stanley Pool. 5420
- Tilapia zilli**, 5417
 distribution, Suez Bay. 3677
 length-weight relationship, Egypt. 5419
- Tillina magna**, DNA in macronuclei. 7650
- Tiluropsis**, larvae, Western North Atlantic. 4465
- Timea stenosciera** sp. n., Barbados. 4825
- Tin**,
 in organisms and in water, Gulf of Naples. 2463
 organic compounds, bactericides. 4764
 pollution. 3749
- Tinca**. 7319
- Tinca tinca**, 8860
 biology, Ireland. 8970

- Tinca tinca**, *contd.*,
reduction in radio-sensitivity of embryos as a
result of preliminary irradiation. 881
- Tintinnidae**,
Lake Quarum. 4519
Lake Tiberias. 2570
- Tintinnidium**, designation of type species. 6865
- Tintinnopsis beroidea**. 5853
- Tisbe**, life cycle in the laboratory. 1222
- Tisbe aragoi** sp. n., Banyuls-sur-Mer. 7733
- Tisbe furcata**, reproduction in culture. 1888
- Tissues**,
cardiac, mitosis, *Spisula solidissima*. 3479
chemical alterations during freezing. 6517
degenerative phenomena, *Alytes obstetricans*. 3528
enzyme activity, *Rana catesbeiana* tadpoles. 5100
histogenetic phenomena, *Alytes obstetricans*. 3529
mesoderm formation, *Ambystoma*. 7149
mineralized, stontium concentration. 4574
neurovenous, *Cephalopoda*. 3488
photosynthetic, lipid content, *Chlorella*, *Euglena*
and *Anabaena*. 5763
toad bladder, Triglyceride formation and hydrolysis,
toad. 6211
transepithelial potential differences, larval and adult
salamanders. 5073
- Tissue differentiation**, significance of DNA/nuclear
size ratio. 718
- Tissue implants**, reaction in *Crassostrea gigas*. 2790
- Tivela**. 7877
- Tivela mulawana** sp. n., South Arabia. 7059
- Toad**,
biogenic amine receptors in sciatic nerves. 2088
effect of propionate and other organic ions on
sodium transport across bladder. 5082
histones. 6220
Na transport across bladder stimulated by 1α -
hydroxycorticosterone. 809
path of bulk water movement through bladder. 6210
triglyceride formation and hydrolysis by bladder
epithelium. 6211
- Tobrilus**. 4861
- Tochuina tetraquetra**, range extension, North Pacific.
2777
- Todarodes**. 5188
- Todarodes pacificus**, 7897
chromatography of haemocyanins. 8698
ecology, Japan. 8697
- Todarodes sagittatus**, electrical behaviour of giant
axon. 7104
- Toheroa**, survey, Wellington, west coast. 4138
- Tokophrya**, structure of peduncle. 3901
- Tokophrya actinostyla**. 3901
- Tokophrya cyclopum**. 3901
- Tokophrya wenzeli** sp. n. 6837
- Tolypella**. 3818
- Tomopteris septentrionalis**. 4870
- Tonna**. 7857
- Tontonia**. 3889
- Tor tor**. 7343
- Tornus subcarinatus**, synonym of *Cyclostrema*
miranda. 2748
- Torpedo**,
influence of low temperature on discharge, electric
organ. 6370
protein separations. 4302
- Torpedo californica**, lesions produced by hydatid-like
cysts. 4301
- Torpedo marmorata**. 5163, 8854
- biophysical parameters of skin. 810
- ectoderm. 7264
- prey-capture and electric organ discharge. 5220
- Torpedo nobiliana**. 5163
- Torpedo ocellata**, influence of low temperature on
discharge from electric organ. 6370
- Tosarhombus octoculatus** gen. et sp. n. 7412
- Toxicants**, 8274
aflatoxins, *Salmo gairdneri*. 8106
alkylate sulphonate, *Pimephales promelas*. 6476
DDT, influence of body weight, *Oncorhynchus*
kisutch. 8100
DDT, *Oncorhynchus* spp. 8103
haemolysis, *Chironex fleckeri*. 5865
heavy metals and phenol, *Salmo gairdneri*. 7452
nicotine, *Pisces*. 6331
NTA. 8248
oil, *Polychaeta*. 9102
oil-dispersing products. 3164
Oncorhynchus, *Salmo*, Washington. 6675
phytoplankton, zooplankton, chemicals. 6678
- Toxins**, 5781, 6338, 6714, 6717, 8856
adaptation to toxic conditions, *Daphnia*. 7721
anaphylatoxin, plasma, eel. 8194
antibacterial, produced by bacteria. 5788
atelopidotoxin, from *Atelopus zeteri*, Panama. 8745
blood serum, *Invertebrata*. 6721
Bufo marinus. 8749
Chironex fleckeri. 8468
Chironex fleckeri, effect on pig heart. 8467
copper complexes, *Scenedesmus quadricauda*. 6773
distribution of toxic crabs, Ryukyu and Amami
Islands. 6056
effect of ciguatoxin from *Gymnothorax* on
acetylcholinesterase in vivo. 930
effect of saxitoxin and tetrodotoxin in frog
neuromuscular junction. 320
effect of tetrodotoxin on giant axons, *Myxicola*. 5939
effect on NMJ, *Rana pipiens*. 3515, 3516
endotoxin, *Mycrocystis aeruginosa*. 4613
fish and amphibian eggs. 6589
fish toxicity, kinetic model. 2415
from *Chrysaora quinquecirrha*, effect on rat
cardiovascular system. 633
Fusarium tricinctum. 7586
Gonionemus vertens. 6892
Gonyaulax tamarensis, North Sea. 5488
Holothuria leucospilota. 2827
ichthyotoxins, *Chrysomonadina*. 3220
in skin, *Pogonoperca punctata*. 5406
investigations of toxicology. 2418
Justicia hayatai var *decumbens*. 5168
marine biotoxins. 6715
natural, foodstuffs of man and animals. 6647
Octopus. 2816
pahutoxin. 8211
paralytic shellfish poisoning, neuromuscular junction,
frog. 7974
Peridinium, effects on other algae. 4744
Physalia physalis toxin on sodium transport across
frog skin. 7675
Phytolacca dodecandra as molluscicide. 7839
poisoning by medusa, *Gonionemus vertens* in sea of
Japan. 5869
poisonous shellfish caused by *Gonyaulax catenella*.
6131
properties of venom neurotoxic protein of *Laticauda*.
780
protection, anemone fish. 7348

Toxins, contd.,

- purification, *Prymnesium*. 3222
 purification, *Prymnesium parvum*. 4629
 saxitoxin, effects on frog NMJ. 7190
 sensitivity to rubratoxin B, *Tetrahymena*, *Volvox*. 7649
 staphylococcal α toxin, permeability changes, frog skin. 7963
 study using *Fundulus heteroclitus*. 5443
 tail autotomy, *Oxyne panamensis*. 8663
 tetrodotoxin effect, neuromuscular junction, frog. 7974
 tetrodotoxin, effect on frog NMJ. 7190
 tetrodotoxin, effect on giant synapse, stellate ganglion, *Loligo vulgaris*. 7100
 tetrodotoxin, effect on nodal membrane, *Xenopus laevis*. 5138
 tetrodotoxin, giant axon, squid. 7099
 tetrodotoxin resistance, sympathetic nerves, *Bufo marinus*. 7154
 transfer of algal toxins through food chains. 8330
 use of *Chlorella* in mycotoxin and phycotoxin research. 5707
Zosimus aeneus. 8605
- Toxoglossa**, anatomy of *Pervicacia tristis* and other spp. 233
- Toxotes jaculatrix**, prey catching by water-spitting. 8187
- Trace elements**, growth of phytoplankton. 6638
- Tracheliaestes chondrostomi**, parasitic on *Chondrostoma nasus*. 168
- Trachelobdella lubrica**. 5550
- Trachinotus carolinus**, 3565
 Louisiana. 6531
- Trachipterus**, Angola. 7378
- Trachurus**, 5188, 5221
- Trachurus japonicus**, 8239
 estimation of enzymes. 3576
 feeding. 3601
- Trachurus symmetricus**,
 communication of velocity changes in schools. 9006
 fishing industry, California coast. 6532
- Trachypenaues**. 5171, 7798
- Transaminase**, *Anguilla*, physiology. 5433
- Transmitters**,
 acetylcholine action, lobster. 6019
 acetylcholine, heart. 5027
 acetylcholine, heart, *Crassostrea*, *Mytilus*. 7881
 ACh desensitization, muscles, *Rana temporaria*. 7185
 AMP, adipose tissue, *Abramis*, *Lucioperca*, *Rana*. 7299
 ATP-breakdowns, flesh, *Cyprinus*. 8123
 catch muscle, *Anodonta cygnea*. 7066
 NMJ, *Rana pipiens*. 8771
- Trachipterus arcticus**. 5163
- Trachipterus iris**, distribution, Santander. 5478
- Trachyscorpia cristulata**. 5164
- Transfer**, catecholamines, frog skin. 5113
- Transparency meter**, photoelectric. 2458
- Transplants**,
 deletion-transplantation, embryos, *Fundulus heteroclitus*. 5446
Disoglossus pictus, *Bufo bufo*, primary ureter. 4219
 immunity, *Ambystoma mexicanum*. 6206
 interspecific nuclear graft, *Pleurodeles*. 8756
 neural-crest cells, *Discoglossus pictus*. 5086
 organ precursors, embryo, *Loligo*. 3485

- pituitary gland, *Notophthalmus viridescens*. 8755
 pituitary, *Xenopus laevis*. 6284
 spinal cord, *Triturus cristatus*. 2065
Xenopus laevis. 6285

Transport of organisms,

- Ascophyllum nodosum*, source of invertebrate distribution. 2527
 effect of delayed fertilization, *Oncorhynchus gorbuscha*. 6421
Laecapex fuscus on water beetle. 7863
 migrations, *Oncorhynchus gorbuscha*, Alaska. 6404
 reaction of plaice. 6579, 9017
Roccus saxatilis. 905

Trap,

- emergence, for collecting stream insects. 215
 for catching crabs, lobsters and shrimps. 4026

Trapezia. 4022**Trapping**, *Ranatra linearis*. 1961**Trash fish**, 7245

- Pandalus borealis*. 7794

Trawling,

- combination trawl and rolling rig. 6059
 fishing potential, South America. 5177
 midwater trawl for sampling discrete depth horizons. 798
 relation of working time to depth of fishing ground, Alaska pollack fishery. 4392
 surface trawl. 5181

Treaties, halibut fishery, Canada, USA. 4384**Trebouxia spp.**, ultrastructural changes under different light conditions. 52**Trees**, *Paramesacanthion*. 5932**Trehalose phosphorylase**, *Euglena gracilis*. 7555**Trematocarpus dichotomus**, morphology. 1804**Trematoda**, 3944, 4366

- Biscayne Bay. 4851
 from fish in Central Africa. 1857
 from *Gasterosteus aculeatus*. 1181
 from gills of marine fish, India. 125
 life histories, Massachusetts. 8482
 parasites in Embiotocidae. 5389
 parasites, India. 8481
 parasites of marine fishes, New Caledonia. 5880
 parasitic larvae, in Littorina. 725
 whole mounts preparation, Mollusca. 4998

Trematomus, blood plasma proteins, Antarctica. 4310**Trematomus borchgrevinkii**, 5421, 9008

- freezing point depressions of glycoproteins. 9008
 heat labile aldolase. 5421

Trematops stonoi sp. n., Permian, Ohio. 8000**Trematopsidae**, relationship, Dissorophidae. 5087**Tremogasterina canu**, Indian Ocean. 6189**Tresus capax**, symbiotic with *Pinnixa faba*, Pleistocene. 201**Tresus nuttalli**,

- papilloma-like growth from siphon. 6153, 8683
 parasites, California. 3336

Triaenodes. 4977**Triaenodon**. 4270**Triaenophorus spp.** in Lake Mälaren fishes. 1179**Triaenophorus crassus**,

- detection with ultrasound. 7687
 parasitic in *Lampetra japonica*. 647

Triaenophorus nodulosus,

- chemiluminescence. 6911
 parasite in *Roccus americanus*, Lake Ontario. 6533

Triakis. 4270**Tribolium confusum**, parasitism by *Hymenolepis microstoma*. 8503

- Tribonema*, 8284
Tribonema vulgare, comparative morphology of zoospores, 23
Trichelaphis caudatus, 3902
Trichiurus, 6376
India, 4435
Trichocorixa, 7002
Trichocysts,
effect on UV on origin in *Paramecium*, 622
structural protein from in *Paramecium*, 1154
Trichodesmium, bloom, Laccadives, 7492
Trichodesmium erythraeum, ultrastructure, 1032
Trichodina, 6562
parasite, *Physa*, 4823
Trichodina domerguei, 6866
Trichodina nigra, infecting fish, Lake Seliger, 106
Trichogaster cosbyi, 7375
polyunsaturated alcohols in wax esters of roc, 443
Trichogaster trichopterus,
growth inhibitors, 8129
immune response, IPN virus, 3035
Trichome breakage, *Microcoleus vaginatus*, 1753
Trichomycetae, new species, ecology, France, 6814
Trichoniscoides, 7744
Trichoniscoides modestus, 7744
Trichopsis vittatus, sounds and postures in aggressive-defensive behaviour, 7374
Trichoptera, 5306
behavioural recognition, 8609
bibliography, Africa, 8610
distribution, Lithuania, 4977
drift fauna, streams, 8436
larvae, diurnal rhythms, 3428
Microsporidiae in larvae, 3890
Oltenia Province, Romania, 1962
Wadden Islands, 4978
Tricladida,
antigens, detection of in predators, 1178
new species, Lake Ohrid, Balkans, 646
predation of, 644
Tridacna, ecology, Palau Islands, 3418
Tridacnidae, symbiotic zooxanthellae, Pacific, 4730
Trididemnum delesseriae sp. n., Glenan Archipelago, 4208
Trigla, 5225, 6376
Triglochin, 7596
Triiodothyronine, effect on DNA synthesis, *Rana catesbeiana*, 321
Trilaminopora gen. n., 6185
Trilobita,
Cambrian, Texas, 7132
fossils, Massif Arize, 7833
Triloculina, 3883
Triloculina echinata, ecology and distribution, Arabian Sea, 5854
Trinchesia spp. n., Tanzania, 7843
Trinectes maculatus, life-history, 470
Trionyx spinifer, water exchange, 3537
Trionyx spiniferus, thymic myoid cells, 2894
Tripedalia, 4834
Tripneustes esculentus, 7913
Tripterygion, 5390
Tripterygion delaisi sp. n., Senegal, 8188
Tripterygion fasciatum, distribution, Indian coast, 8164
Triptychia, 7019
Tripylium carcinocolum, 7690
Triticella koreni, reproduction, 2842
Triton, 7145, 8126
rejected gen, 728
Triton cristatus, negative Bohr effect, 2064
Tritonalia Fleming 1828, suppressed, 728
Tritonia diomedea, biosynthesis of DNA in giant neurons, 6127
Tritonia festiva, Japan seas, 238
Tritoniopsis alba, 6117
Tritoniopsis elegans, taxonomy, 3458
Triturus,
gen., 2862
lymph hearts, physiology, 5134
neurotrophic control of protein synthesis, 4245
Rana, *Xenopus*, ion exchange investigation, 4241
Triturus alpestris, 6202, 6227
sexual differentiation, 6273
situs correlations, alimentary canal, 5124
situs viscerum after defects in ectoderm of blastula, 7196
ultrastructure of oocyte nuclear envelope, 5125, 6275
Triturus cristatus, 5614, 7198, 8768, 8783
enzymes in oviduct, 5127
haemoglobin polymorphism, 8782
histochemistry, cholinesterase, axial mesoderm, 7197
protracted prolactin production, 6274
spinal cord transplants, 2065
structure of the papilla, 772
ultrastructure, histochemistry, skin, 5126
vitamin C, 8784
Triturus helveticus, effects of acid on mitoses and diastema, 5130
Triturus pyrrhogaster, 7200, 8786
active groups, proteins evoking primary differentiation, 5133
behaviour of histones and cytoplasmic basic proteins, 6271
changes preceding furrow formation in cleavage, 8786
cortical and subcortical changes preceding cleavage, 7200
culture of testes cord, 8785
deformation of germ cells, 5132
formation of mitochondria in oocytes, 5131
in vitro cultivation of testis cord, 7199
ultrastructure of parathyroid, 8001, 8002
Triturus viridescens,
alteration of nucleolar ultrastructure in cells, regeneration, 8003
haemoglobin changes during metamorphosis, 8787
lateral-line sensory organs, 2067
lower jaw regeneration, 2861
Triturus vulgaris, 4798, 6227
reactions to light, 2889
sexual differentiation, 6273
Triviaceae, bibliography, radula, 7022
Trochidae, zonation under artificial tides, 6118
Trochospongilla, 4826
Trochospongilla petrophilla sp. n., 3910
Tropical environment, nitrate and meridian circulation, Pacific Ocean, 5554
Tropidonotus, parasitism by *Proalarioides*, 5910
Trout, 4571
Trygon, occurrence of *Echinobothrium reesae*, 1175
Trypanosoma canadensis, development in *Placobdella*, 1151
Trypanosoma chrysemydis, life cycle, 1150
Trypanosoma lotae sp. n., parasite in *Lota lota*, 8457

- Trypanosoma rotatorium**, parasitism of *Rana clamitans*, Louisiana, 5101
- Trypanosomes**, in amphibians and reptiles in Ontario, 1149
- Trypetesa**, age behaviour at metamorphosis, 3367
- Trypetesa lampas**,
chromosome constitution, 5985
Trypetesa nassarioides, 7734
- Trypetesa (=Alcippe) nassarioides**, spermatozoon, 1896
- Trypsin**,
Astacus leptodactylus, 8569
Penaeus setiferus, 1932
- Tuamotus**, 8642
- Tubularia**,
effect of hyperbaric oxygen and succinic dehydrogenase in development, 7678
regeneration in electric field, 8477, 8478
- Tubularia crocea**, chemotactic turning behaviour of spermatozoa, 6897
- Tubifex costatus**, 7701, 9069
- Tubifex tubifex**, 9069
feeding in polluted harbour, 2620
- Tubificidae**, 4512, 5882
effects of lead, nickel, PCP, 9076
marine sediments, 3166
- Tubiphytes**, 5629
- Tulasnella zooecia**, parasite, *Amoeba terricola*, 4772
- Tumours**, 6327
aflatoxicosis-induced, *Oncorhynchus*, *Salmo*, 4328
invertebrate, 3878
- Tuna**, colour, preservation, 3683
- Tunic**, of *Boltenia* and *Molgula*, 285
- Tunicata**, 6605
heart, 5061
nervous system, 2044
Salpidae, distribution, West Africa, 4210
type specimens, Zoological Museum, Amsterdam, 7935
- Turaniella vitrea**, morphology, morphogenesis, 8458
- Turbanella hyalina**, bacteria as factor affecting, 5536
- Turbatrix aceti**, 3948
- Turbellaria**, 3875, 5529, 7116, 8439
new triclads, Lake Ohrid, Balkans, 646
on Murray River *Chelonia*, 1864
spermatozoa, 2585
- Turbo**, 5863
- Turborotalia opima**, 7624
- Turridae**, taxonomy, Siboga-Collection, 4123
- Tursiops**, oesophagus and stomach histology, 3550
- Tursiops gilli**, 7227
- Tursiops truncatus**, 6310
electrocardiogram, 4268, 8032
morpho-functional features of acoustic organs, 8830
- Turtle**,
ATPase, bladder, 5152
chymotrypsins, 5141
distribution, Guiana, 3539
effect of angiotensin on heart rate, 6292
poisoning, 3538
sodium transport, 5150
sodium transport, bladder, 5148
- Twin species**, in epicarids and rhizocephalans, 1895
- Tylocephalum metacestodes**, tegument and microvilli, 2593
- Tylos latreilli**, ecology and behaviour, 701
- Tylos punctatus**, behaviour and life-history, 700
- Tylosurus crocodilus**, eggs and larvae, Bombay, 4479
- Type species**, 7644
Acanthopleuroceras, 7095
- Azogocypridina*, holotype description, 4094
- Buccinaceae*, Senckenberg Museum, 7033
- Leptotintinnus*, 6865
- Stictoporellina*, Ordovician, Minnesota, 6195
- Tintinnidium*, 6865
- Type specimens**,
Amphibia and *Reptilia*, Macleay Museum, Sydney, 4212
Bivalvia, Cretaceous, South Dakota, 7874
Cyprinoidea, Thailand, 4356, 8930
Gammarus pulex, 3395
Mollusca, American museum of Natural History, 4108
Mollusca, Geneva, 4126
Penaeus granulosus, 7799
Pisces, 7235
Pisces, Tulane University, 6320
Scorpaena microlepis, 4427
Tunicata, Zoological Museum in Amsterdam, 7935
- Typha**, 8137
productivity and root/shoot ratios, 4775
- Typha angustifolia**, 8423
- Typha latifolia**,
factors influencing shoot production, 7608
loss of minerals during decomposition, 4795
nutrition, 7609
- Typhloscolex muelleri**, 4870
- Typhlotanais magnificus**, extra-marsupial development of eggs, 6994
- Tyrosine oxidase**, isolation, *Rana pipiens*, 4236

U

- Uca**, 4911, 7690
distribution, 2701
form and function of vibrational signals, 7810
- Uca inaequalis**, 7810
- Uca pugilator**,
collagenase from hepatopancreas, 4973
dimorphic variants and chromatophore responses, 6052
effects of biogenic amines on chromatic behaviour, 6053
- Uca pugnax**,
melanogenesis, 6054
reflex control of muscles of cheliped, 6995
- Uca tangeri**, 7810
eco-physiology, posing behaviour, 6996
- Udonchus**, 7689
- Udotea**, 8326
- UDPG-pyrophosphorylase**, 3819
- Uenasellus** gen. n. 8568
- Uganda**,
Lake George, chemistry, 3091
Lake George, *Lernaea barnimiana*, 1886
Lake George, limnology, 3725
Lake George, zooplankton, 3067
- UK**, twin seals in Scotland, 332
- Ulocladium**, 6815
- Ulothrix subflaccida**, France, specificity, 3247
sperm, *Gnathostomula* spp. 1176
sperm, *Libinia emarginata*, 7779

- Ultrasonic radiation,**
detection of parasites, *Trianaophorus crassus*, 7687
Schizopyrenus russelli, 4818
- Ultrastructure, (see also Anatomy, Electron microscopy)**
adenohypophysis, *Oncorhynchus keta*, 8911
adenohypophysis, *Oncorhynchus nerka*, 5276
Amphipleura rutilans, 1760
Anabaena variabilis, cyanophage attack, 1817
Anacystis nidulans during synchronous growth, 1750
arthrobranch, *Pacifastacus leniusculus*, 6036
Aulacodiscus, 5664
autotransplanted pituitary, *Notophthalmus viridescens*, 6231
basal bodies of oral apparatus, *Tetrahymena pyriformis*, 8455
blastoderm, *Salvelinus fontinalis*, 6438
blood systems, *Heterodontus portjacksoni*, 6364
Brachiomonas submarina, 30
Brachydanio rerio, 6443
Caulerpa prolifera, 33
cell wall, *Closterium*, 1035
cell wall, *Pyrocystis*, 4746
cephalic and caudal regeneration in *Syllis*, 659
Ceratum hirundinella, 8394
changes in *Trebouxia* spp under different light conditions, 52
Chlamydomonas chloroplasts, in mutants devoid of chloroplast membrane stacking, 563
Chlamydomonas chloroplasts, in mutants lacking photosynthetic components, 562
chloroplast, *Chlamydomonas reinhardtii*, 5699
chloroplast, *Mesodinium rubrum*, 1142
chloroplast, *Porphyridium*, 4719
Chroomonas mesostigmatica, 1793
Chrysophyceae, New Zealand, 8317
Cladophora, *Spongomorpha*, 8352
Cobitidae, 5330
coenobial envelope, *Scenedesmus dispar*, 1056
Conchocells stage, *Porphyra leucosticta*, 4717
Cryptomonas spp, 4732
Cylindropyxis profunda, frustules, 2496
cytochemical, of glycogen and ribosomes in *Xenopus gastrulae*, 773
cytochrome c, ovocyte, *Artemia salina*, 4883
cytoplasmic microtubules, tetraspora, *Schizochlamys*, 3246
deutoplasmic inclusions, *Dugesia* spp, 4857
Diacronema vlikianum, 540
Diatomaceae, 5659
diatoms, 8308
digestive tubules, *Cardium edule*, 7076
ectoderm, *Helostoma temminckii*, 8992
eosinophil leucocytes, vertebrates, 5614
epidermis, *Entobdella soleae*, *Acanthocotyle elegans*, 8501
erythrocytes, *Eptatretus stoutii*, 8060
Euglena gracilis, 5760, 8396
eye and optic tentacle, *Cardium edule*, 7879
eyes, *Onithochiton neglectus*, 3494
flagella, *Strigomonas oncopelti*, 110
freeze-etch study, *Molliensia* skeletal muscle, 5456
G-6-P localization, crayfish, 4079
gastric shield, *Lasaea rubra*, 7885
gas vacuole membranes, *Microcystis*, 2494
gill cells, *Helostoma temminckii*, 8172
Glaucosphaera vacuolata, 8304
Gnathostomulidae, 2595
granulated cells of heart, *Limnaea stagnalis*, 7046
growing point, *Caulerpa sertularioides*, 1040
growth margins, articulate brachiopods, 281
Gymnodinium fuscum, 585
Halimeda, calcification, 1779
heart, skeletal muscles, *Lampetra fluviatilis*, 6356
Helicoprordon multinucleatum, 7637
Hemiselmis, *Chroomonas*, 4743
integument, Rotifera, 7688
intercellular communications, oscula Porifera, 6883
interrenal gland, *Salamandra*, 324
iridescent bodies, *Gastroclonium*, 3270
Labyrinthula coenocystis, 3321
Lithodesmium undulatum, mitosis, 4627, 4628
Mallomonas spp, 2497
medio-intestinal gland, *Astacus fluviatilis*, 7756
medullary command nucleus, electric organ, *Raia*, 6366
mesogloea, *Cyamon neon*, 4829
microtubules, *Paramecium aurelia*, 4810
microtubuli, *Mougeotia*, 7520
mitosis in plant cells, 1742
myofibrillogenesis, striated muscles, vertebrates, 6427
Myxine cardiac tissue, 806
nauplius eye, *Doropygus seclusus*, 7729
nauplius eye, *Sapphirina*, 163
nephridium, *Hirudo medicinalis*, 4874
normal and 131I-treated newt thyroid gland, 766
nuchal organ of *Eurythoe complanata*, 1193
nuclear envelope oocytes, *Triturus alpestris*, 5125, 6275
nucleolar, iris epithelial cells, regeneration, *Triturus viridescens*, 8003
nucleus, *Paramecium aurelia*, 4810
oocytes, Amphibia, 7945
oocytes, Teleostei, 7347
oogenesis, *Hyanassa obsoleta*, 2757
Orconectes virilis ganglionic roots, 3407
Paramoeba eilhardi, 6860
Parophrys vetulus, kidney tubules, 5462
pars distalis, interrenals, *Taricha torosa* after administration, *Metopirone*, 6270
pharynx, hepatic caecum, *Branchiostoma*, 3501
phycoerythrin, *Porphyridium cruentum*, 4721
Pinctada radiata, ingestion of thorotrast by amoebocytes, 2023
plasma membranes from retinal axon, squid, 7898
plasmodesmata in *Bulbochaete hiloensis*, 31
polysaccharide and calcareous inclusions in *Spirostomum*, 624
Precambrian microorganisms, 5638
primary spectacle, *Petromyzon marinus*, 8067
proteins, egg capsules, *Buccinum undatum*, 7852
Protococcus, 5726
protonephridia, *Asplanchna*, 7696
pseudobranch, *Paralichthys lethostigma*, 3706
Pseudoglophloea, pit connection formation, 1800
quasi-crystalline lamellar lattice in chloroplasts, *Zygnema*, 5732
respiratory organs, *Culex pipiens*, 4984
Rhodella maculata gen. et sp. n. 4723
rod outer segment, frog, 6247
salivary secretory surface, *Notommata copeus*, 6918
scent glands, *Notonecta glauca*, 7012
secretory granules, salivary glands, *Limnaea stagnalis*, 7045
sense organs, *Nautilus*, 3491
sperm, *Cirripedia*, 7735

Ultrastructure, contd.,

- sperm, *Pennaria tiarella*. 7673
 spermatogenesis, *Aplysilla rosea*. 8461
 spicules, *Spongilla lacustris*. 6867
Spirulina platensis. 5640
 spores, *Minchinia*. 5841
Symbiodinium microadriaticum. 4748
 tentacle, *Chrysaora quinquecirrha*. 4838
Thalassiosira spp. 5687
 theca, *Dinophyceae*. 4728
 tissues involved in regeneration of *Syllis amica*. 145
 trichocyst development, *Paramecium*. 4811
Trichodesmium erythraeum. 1032
Triturus cristatus skins. 5126
 trophic and encysted *Polytomella agilis*. 2526
 trunk musculature, *Rhincalanus cornutus*. 5978
 tubular trichocysts, *Pyramimonas grossii*. 8364
 tunic, *Boltenia*, *Molgula*. 285
 Tylocephalum tegument. 2593
Urosalpinx cinerea, boring organ. 2779
 vacuolar system, *Brachiomonas submarina*. 5695
 vasodentine, *Urophycis tenuis*. 5384
 vegetative stages, *Aggregata eberthi*. 4803
 vertical lobe of brain, octopus. 8692
 vitelline membrane, pericardiac sac, *Poecilia reticulata*. 3697
 Volvox with reference to inversion. 1060
Zonaria farlowii, reproduction. 1790
 zooxanthellae of *Viguieriotis edwardsii*. 8479
 zymogen cells, *Hydra viridis*. 122

Ultraviolet,

- absorbing substance in corals and blue-green alga. 115
 effect on *Chlorobium thiosulfatophilum*. 4756
 effect on photosynthesis, *Chlorophyceae*. 4684
 inactivation and photoreactivation, *Chlorella* culture. 8345
 insensitivity of photosynthesis, *Euglena*. 7549
 investigation of genetic apparatus of sperm, *Misgurnus fossilis*. 6473
 investigation of organic pollution. 3135
 RNA estimation, trout and goldfish. 3172
 sensitivity of cleavage delay, *Echinarachinus parma*. 8714
Sphaerotilus. 3909

Ulva,

- acrylic acid. 5688
 light-induced changes in thylakoid membrane. 5731

Ulva fasciata, growth in culture and field. 8370**Ulva lactuca**, 7467, 8281

- distribution, Clipperton atoll. 7527
 effect of micronutrients. 2480
 IAA effects. 7526

Ulva latissima, effect of ammonia nitrogen on growth. 576**Ulva lobata**. 4588**Ulva mutabilis**,

- cell size, nucleic acids, and synthetic efficiency in the wild type and a growth mutant. 1063
 chromosomal factor exerting effect on morphogenesis. 6776
 mitosis. 3832

Ulva pertusa, 3190

- nuclear division. 1058

Ulvales, taxonomy. 6750**Ulvella**. 6725**Umbellulidae**, distribution extended in the Atlantic. 3937**Umbonula**. 7931**Umborotula borogensis**. 3907**Umbra limi**, effects of hypophysectomy and temperature acclimation on metabolism. 7298**Undecane acids**, degradation, *Pseudomonas*, North Sea. 8415**Underwater research**, Black Sea laboratories. 4565**Underwater topography**, Gulf of Mannar. 4531**Undinella acuta** sp. n., northeastern Pacific. 4013**Undinella altera**. 6940**Undinella grisei**. 8544**Undinella hamptoni**. 6940**Undissolved gases**, respiration, *Chelys fimbriata*. 8808**Unio crassus**, population studies, Nera River. 2019**Unio pictorum**,

- chromosomes. 243
 oxygen consumption. 8685
 rhythmical behaviour. 7071

Unio tumidus, population studies, Crapina marsh. 2020**Unionidae**,

- ecology, Danube. 8684
 effect of pH changes. 2787
 Lamarck's, illustrations. 2806

Unisexuality, *Poeciliopsis*. 2330**Upogebia littoralis**, 5-HTphan-decarboxylase activity. 6055**Uptake of ions**, methods of determining food assimilation, aquatic animals. 9106**Upwelling**,

- cause of phytoplankton bloom. 3849
 Gulf of Guinea. 6627

Uracil, incorporation and photopigment synthesis in *Rhodospirillum rubrum*. 74**Uranium**, fusion products, pollution. 9083**Uraspis helvola**, distribution, Bay of Bengal. 4436**Ureohydrolase**, action of metallic ions, *Raja clavata*. 5215**Urceolaria kozloffii** sp. n., symbiont, Brachiopoda. 7651**Urceolariidae**,

- from *Cyprinus carpio*. 113
 parasites from fish, Lake Seliger. 106
 parasitic, south-west Atlantic. 6866

Urea, molluscicides. 1972**Urechis caupo**,

- RNA. 7711
 RNA and protein synthesis in fertilized and unfertilized eggs. 1205
 RNA and protein synthesis in unfertilized eggs. 1204

Uria aalge, 7460

- causes of mortality, California. 3545
 dimorph-ratio cline, Norway. 8024

Urine, ability to concentrate in *Fundulus*. 458**Urnatella gracilis**, spirally-arranged subunits in A-filaments. 282**Urochordata**. 3875**Urocleidus circumcirrus**. 8480**Urocleidus tuberculatus**. 8480**Urocleidus udicola**. 8480**Uroglana eustylis**. 6597**Uroglana notabilis**. 6597

- Urolopus paucimaculatus**,
 distribution, Tasmania. 4293
 first Tasmanian record. 925

Uronema, culture. 1838**Uronema gigas**, regeneration of protoplasts. 6777**Urophycis chuss**, FPC. 884**Urophycis tenuis**. 4387

- ultrastructure of vasodentine in teeth. 5384

Urophysectomy, *Gasterosteus aculeatus*. 2343**Uroptychus**, larvae, New Zealand. 4044

- Uroptychus gracilimanus*. 8559
Uroptychus naso. 8559
Uroptychus scandens. 8559
Urosalpinx cinerea,
 boring. 2778
 boring organ, carbonic anhydrase. 2780
 boring organ, ultrastructure. 2779
 distribution of drills, Canada. 239
 physiology. 8654
Urostyla cristata, trichocyst distribution. 7652
Urtica. 7788
Uruguaya repens, taxonomy. 8464
 USA,
 Alabama, *Graptomys nigrinoda delticola* subsp. n. 3532
 Alabama, phytoplankton blooms. 3574
 aquaculture. 3590
 Arkansas, *Etheostoma* (*Oligocephalus*) *collettei* sp. n. 890
 Atlantic coast, distribution of *Clymella torquata*. 2607
 California, archaeological Mollusca. 2740
 California, *Batillipes gilmatini* sp. n. 3433
 California, *Calliarthron* growth rates. 3266
 California coast, mortality of *Uria aale californica*. 3545
 California, coldwater reservoirs, limnology and productivity. 3723
 California, distribution of angling effort in 1968. 3581
 California, finding of *Zalophus californianus* with skeletal deformity. 3552
 California, fouling and boring organisms. 2833
 California, *Galeus piperatus*. 2943
 California, Humboldt Bay, tag loss in *Embiotocidae*. 3656
 California, Imperial County, Bard Valley, *Tilapia mossambica*. 3672
 California, Lake Tahoe, *Cottus beldingii*. 3655
 California, Lake Tahoe, food of *Salvelinus namaycush*. 3623
 California, Lake Tahoe, primary production. 3072
 California, larval cestodes of bivalves. 3336
 California, *Misgurnus anguillicaudatus*. 3647
 California, Monterey Bay, growth and longevity of calcareous fouling organisms. 3314
 California, *Mopalia hindsi recurvans*. 2822
 California, Mugu Lagoon, Protothaca staminea. 2804
 California, *Octopus-Scorpaena*, predator-prey relationship. 3489
 California, Sacramento-San Joaquin river estuary, *Neomysis awatschensis*. 1262
 California, San Joaquin Valley, waterfowl botulism. 3543
 California, Santa Barbara, *Opisthobranchiata* and *Opisthoteuthis californiana*. 2767
 California, Santa Catalina Island, *Ocythoe tuberculata*. 3490
 California, *Tilapia mossambica* distribution. 3672
 Carolina coast, Sargassum. 3261
 Carolina, *Nucinella serrei*. 3471
 Cenozoic marine molluscs, Pacific coast. 222
 Characeae compared with those of India. 551
 Chesapeake Bay, estuaries, Foraminifera. 1830
 Chironomidae, ecology. 3432
 Colorado, Hirudinea. 3345
 Colorado, Hydracarina. 2732
 Colorado, South Platte River, altitudinal distribution of fish. 861
 Columbia River, *Aspidogaster conchicola* in molluscs. 2808
 Columbia River, *Prionotus stephanophrys*. 3668
 Delaware, resistance of oysters to *Minchinia nelsoni*. 3461
 distribution of *Hymenopenaeus robustus* on commercial fishing grounds. 1916
 fish culture. 3565
 Florida, Apalachee Bay, *Eirgos anurus*. 3361
 Florida, Biscayne Bay, year-round production of gametes by polychaetes. 3347
 Florida, *Cassia madagascariensis* reproduction. 3441
 Florida, *Gambusia rhizophorae* sp. n. 3690
 Florida, *Helicodictyon plancticum*. 2516
 Florida, Lake Alice, breeding ecology of herons. 785
 Florida, live bait shrimp fishery. 2694
 Florida, *Penaeus duorarum* larvae. 2678
 Florida, shallow-water Mysidacea. 694
 Florida, shrimp fishery predictions. 2689
 Florida, tolerance limits of *Bufo marinus*. 5081
 Galveston estuary, *Penaeus* juveniles. 2692
 Great Lakes, *Cladophora glomerata*. 2511
 Great Lakes, water resource. 3134
 Gulf of California, *Purpurellus* taxonomy. 2771
 Gulf of California, *Scyllarides* distribution. 3394
 Gulf of Maine, breeding of *Pasiphaea multidentata*. 699
 Gulf of Maine, first record of *Sciaenops ocellata*. 907
 Gulf States, shrimp statistical programme. 2683
 Idaho, limnology of 2 reservoirs. 972
 Kentucky, Eocene rust and alga. 1117
 Lake Erie, distribution of oligochaetes. 1203
 Lake Michigan, chlorinated and hydrocarbons in *Oncorhynchus*. 836
 Lake Michigan, pollution. 3768
 Lake Michigan, seasonal fluctuations of diatoms. 1766
 Lake Washington, oscillaxanthin in the sediment. 1029
 Louisiana, *Etheostoma* (*Oligocephalus*) *collettei* sp. n. 890
 Michigan, Douglas Lake, protozoan communities. 1828
 Minnesota, freshwater algae. 3802
 Missouri and Arkansas, *Gammarus* (*Rivulogammarus*) *elki* sp. n. 1245
 Naragansett Bay, cell division of *Detonula confervacea*. 3217
 New Britain, *Trimmia tevegae* sp. n., vertical orientation. 3679
 New England, *Alona bicolor*. 2623
 New England, *Germaea dendritica*. 2755
 New England, lobster stocks. 2648
 New England, reproduction of *Polydora* spp. 2616
 New England, shell-boring polychaetes. 2605
 New Hampshire, effect of altitude on aquatic plants. 2561
 New York, Onondaga Lake, primary production. 3127
 North Carolina, benthic algae. 3792
 North Carolina, *Bursatella leachii pleii*. 2744
 North Carolina coast, phytoplankton. 3062
 off-bottom oyster culture. 2789
 Ohio, zoological bibliography. 1737
 Oklahoma, reservoir, ecology of *Hexagenia naiads*. 2717
 Oregon coast, *Dinosoma manter* spp. n. 2584

USA, contd.,

- Oregon coast, *Hyperprosopon anale*. 3659
- Oregon coast, *Sergestes similis*. 1936
- Pacific coast, boring organisms. 2793
- Pacific coast, distribution of biomass in rocky intertidal communities. 978
- Philadelphia, Potomac River, Insecta. 3137
- Potomac River, protozoan aggregations. 2564
- San Francisco Bay, *Philometra americana* in *Parophrys vetulus*. 3341
- South Carolina, salt marshes vegetation transplantation. 3865
- southern states, Planorbidae, ecology. 3440
- Texas, Galveston Bay, *Mysidopsis bahia* sp. n. 695
- Texas, Lower Sabine River, benthos. 1682
- Texas, *Sternopsis scutata*. 1200
- University of Miami, Institute of Marine Sciences, aquaculture. 1933
- Utah, Great Salt Lake. 2624
- Vermont, Lake Champlain, water masses. 3085
- Virginia, Elizabeth River, distribution of phytoplankton. 958
- Washington, Fern Lake, ¹³¹I uptake by biota. 4571
- Washington, *Platysiphonia decumbens* sp. n. 3272
- Washington State, Ophiuroidea. 756
- weed control in fish ponds. 3558
- west coast, invertebrates distributed by *Ascophyllum*. 2527
- Yellowstone National Park, recovery of hot spring community. 1752
- Yellowstone National Park, *Zygonium*. 3249

USSR,

- aquaculture. 3632, 3638
- control of carp diseases. 4366
- Dnieper River, Trematoda. 3941
- Kiev Reservoir, productivity. 3982
- Kiev Reservoir, soil proteolytic activity. 3856
- Narochan Lakes, bacteria. 2556
- Volga Delta, Heteroptera. 1955

V

- Vaginal band, Balaenoptera. 2900
- Vaginulus borellianus*, tentacles. 2781
- Vahlkampffia reichi*. 3317
- Vallisneria*. 7437
- Valonia*, proline content, vesicles, sporelings. 3248
- Valonia utricularis*, determination of reflection coefficients, membranes. 6778
- Valonia ventricosa*, osmoregulation. 4698
- Valvata*. 7019
- Vanadium*, determination in water by neutron activation analysis. 6644
- Vaolonia*. 8326
- Variability,
 - Acontiphorus antennatus*. 4894
 - Acontiphorus armatus*. 4894
 - Chrosomus erythrogaster*, *C. eos*. 867
 - diversity in feeding, *Phalacrocorax penicillatus*, California. 8825
 - Homarus americanus*. 1914
 - Oncorhynchus keta*. 4323

- Pterocladia pyramidale*. 1801
- Varicorhinus damascinus*. 7684
- Varieties, *Rhizophydium sphaerocarpum*. 7589
- Vaucheria*,
 - central Europe. 6747
 - collections from Geneva region. 3815
- Vaucheria longicaulis*, from India. 545
- Vayssiarea caledonica*. 6117
- Vectors,
 - Dracunculus medinensis* by *Cyclops*. 7726
 - encephalitis, Culicidae, Sarawak. 7830
- Vegetation,
 - cryovegetation, Northeast Greenland. 5698
 - drift. 3781
 - Lake Vesikärvi, Finland. 1139
 - off-shore barrier island. 3866
 - relation to water velocity, Finland. 1138
- Velella,
 - left-handedness. 4848
 - occurrence in Japanese waters. 3932
- Veneridae, Brazil. 7877
- Venezuela,
 - Caulerpa* spp. 32
 - Lake Maracaibo, new Nematoda. 3340
 - shrimp industry. 2673
- Venom, neurotoxic protein in *Laticauda*. 780
- Ventricularia. 7877
- Venus mercenaria*, growth, Mediterranean. 4168
- Veretillum cynomorium*,
 - regeneration. 2583
 - structure, mesenchymatous cells, intramedullary nerves. 7679
- Verma ansp* sp. n., W. Atlantic. 948
- Vermetidae, Brazilian coast. 2404
- Vermetus triquetus*, larvae, Marseille. 6912
- Vermicularia spirata*, uncoiling. 240
- Vermiliopsis*. 3975
- Vermiliopsis hawaiiensis*. 3975
- Vermiliopsis torquata*. 3975
- Verongia aerophoba*. 5781
- Verrilliteuthis hyperborea*, buoyancy mechanisms. 6156
- Vertebrae,
 - anomalies, *Menidia menidia*, Atlantic. 7403
 - curvature, *Anguilla anguilla*. 3039
 - osteology, *Sciaenidae*, Japan. 6489
- Vertebrata,
 - cave and mines, Morecambe Bay. 7615
 - changes in DNA of cell nuclei during evolution. 8732
 - comparative physiology of chromatophores. 8428
 - distribution of soluble proteins. 7269
 - malate dehydrogenase isozymes. 8126
 - myofibrillogenesis in striated muscles. 6427
 - phylogeny, neoplasia influence. 4569
 - physiology. 7237
 - pyrimidine clusters in DNA. 8086
 - rRNA transcription unit evolution. 8087
 - similarities, neurohypophyses. 6437
 - spring-loaded spearing gig. 6706
 - survey for parasites, Malaysia. 8034
 - survey for parasites, Philippines. 8035
 - variations, lung phospholipid class composition. 7970
- Vertical distribution, (see also Distribution)
 - algae, Bay of Fundy. 4580
 - Ambystoma opacum* larvae at lunar eclipse. 4215
 - bacteria, algae, Lago do Castanho. 5527
 - bacteria, Baikal Lake. 4753
 - Balanus*, Genoa harbour. 6955
 - Benthosoma glaciale*, Northwest Atlantic. 4443

Vertical distribution, contd.,

- Copepoda, Pacific. 4892
cyanophage. 3207
dissolved organic matter, Florida. 8235
effect on population dynamics, algae. 8285
eggs and larvae, Pisces, Skagerak. 4304
epiphytes on stipe, *Nereocystis luekaena*. 6784
Euphausiacea, Madagascar. 5510
Euphausiacea, North Sea. 6017
fauna, Baltic Sea. 5346
ichthyofauna, scattering layers. 5557
interzonal Copepoda, Pacific. 4893
invertebrate, stream bed. 6611
Isopoda, North Sea. 6028
Lates mariae, Lake Tanganyika. 6500
planktonic copepods, Georgian Bay. 2633
littoral environment, Balanus, Littorina, British Isles. 7441
Pandalus jordani. 6980
Pericarida, Gulf of Marseilles. 4072
Pisces, Lake Kizaki and Lake Nakatsuna. 7234
plankton. 3718
plankton, Banyuls-sur-Mer. 4497
Polychaeta, Pacific. 4870
Sternoptychidae, Gulf of Mexico. 4314
Thunnus albacares, Pacific Ocean. 9009
zonation, physiological aspects in marine littoral algae. 1092
zooplankton. 3065
zooplankton, Baltic Sea. 1671
zooplankton, Baltic Sea and Gulf of Riga. 5507
zooplankton, Lake Maggiore. 3068
- Verticillium albo-atrum**, estimating propagules in fields and irrigation water. 608
- Verticordia (Haliris) spinosa** sp. n., diagnosis. 731
- Verticordia (Trigonulina) hancocki** sp. n., diagnosis. 731
- Veternio verrens**, taxonomy, Hawaii. 7421
- Vetтория longifurca**, records from western Mediterranean. 4014
- Vetтория parva**, records from western Mediterranean. 4014
- Vexillifera bacillipedes** sp. n., mitosis and pseudopod formation. 2571
- Vibrio**, 3462, 3857, 3858, 5772, 8871
cause of bacillary necrosis, *Crassostrea*, *Mercenaria*. 6137
haemolysis. 75
- Vibrio anguillarum**, immunology of *Anguilla japonica*. 2315
- Vibrio cholerae**, Calcutta water. 2557
- Vibrio marinus**, nature of marine psychrophilic. 5778
- Vibrio parahaemolyticus**, 5777
distribution, Washington. 7573
from *Callinectes sapidus*. 1235
haemolysis. 75
occurrence in shell fish, Netherlands. 7577
- Vibrio septicus**. 3296
- Vibrionaceae**, peroxidase activity. 3857
- Victoria amazonica**,
leaf development. 3312
patterns of vascular bundles. 3873
- Vietnam**,
algal bloom. 1746
Euglenophyceae, Chlorophyceae. 27
Tardigrada. 2735
- Vigueriotes edwardsii**, ultrastructure Zooxanthellae. 8479
- Villorita cochinchensis**, fallout radioactivity in. 261
- Vinciguerria nimbaria**, 4306
distribution, Japan. 4355
- Virginia**, distribution of *Chrysaora quinquecirrha*, York River. 118
- Viruses**, (see also Bacteriophages)
algal, multiplication. 8293
concentration from sewage. 3754
cyanophage, attacking *Anabaena variabilis*. 1817
cyanophage, distribution. 3207
detecting IPN in *Salvelinus*. 381
ECHO. 3767
Enterovirus, isolation from sewage. 5794
IHN, control, *Oncorhynchus nerka*. 8102
immunization, ducks, hepatitis. 8018
immunization, Peking ducks. 8017
infections, *Pimephales promelas*. 3648
IPN, immune response, *Trichogaster trichopterus*. 3035
IPN, *Oncorhynchus kisutch*. 4325
IPN, Salmonidae. 5300
IPN, Salmonidae, Canada. 5299
IPN, *Salmo pancreas*. 855
isolation of human enterovirus from *Mytilus*. 743
lamellar membrane encircled, erythrocytes, *Rana pipiens*. 7986
littoral pollution. 6681
LPP-1, *Crassostrea virginica*. 4765
LT-1, ovary cells, *Salmo gairdneri*. 8105
poliovirus, behaviour in seawater. 8422
renal carcinoma, *Rana pipiens*. 8774
restricted replication in BHK cells, frog. 8801
susceptibility, duck. 7209
transmission. 3767
water content. 3767
water supplies. 985, 986
- Vision**,
colour discrimination, *Carassius auratus*. 4360
evolution of vision organs. 612
Hermisenda crassicornis, morphology. 4121
shape discrimination in octopus and *Carassius auratus*. 2031
thresholds and spectral sensitivity in *Solea* and *Pleuronectes* larvae. 946
- Vitamins**,
chlorophyll d, isolation, *Grateloupia dichotoma*. 4712
Chrysochromulina sp. 4621
contents, seaweeds, Baltic Sea. 8277
effect on growth and development of algae. 1764
nutrition, *Rhodella maculata*. 4724
persistence in seawater, temperature and solar effects. 5553
requirement for growth. 3862
requirements, *Seriola*. 3670
requirements, *Seriola quinqueradiata*. 3669
- Vitamin B**,
Chaetoceros simplex. 5666
production, *Cyprinus carpio*. 8957
production of, by intestinal bacteria, *Cyprinus*. 6459
- Vitamin B₂**, content, carp. 8124
- Vitamin B₆**,
effect on algae. 2480
meats and fish. 8042
- Vitamin B₁₂**, 5684
effect on algae. 2480
in waters of English Lake District. 1089
required by marine brown algae. 1070
transudation, bottom sediments, Japan. 8404
- Vitamin C**,
assays of animals. 7476

Vitamin C, contd.,

- embryos, *Salmo trutta*. 8110
- requirements, *Oncorhynchus* and *Salmo*. 2976
- Triturus cristatus*. 8784

Vitamin E,

- effect on *Asplanchna*. 1869, 1870
- requirements of, carp. 8956

Vitellogenesis, fate of conjugated proteins during,

Paratellurina. 199

Viviparity, Patiriella vivipara.

4186

Viviparus.

7019

Viviparus ater, seasonal variations in spermatogenesis.

5012

Viviparus fasciatus, biosynthesis of 3 β -sterols.

729

Viviparus viviparus, morphophysiological adaptations

to viviparity. 7056

Vocalizations,

- Cetacea. 5159
- release call, *Bufo calamita*, female. 2850
- Zalophus californianus*. 5160

Volatile bases, as potential quality index in Micropogon

and *Leiostomus*. 900

Volcanic activity, Vulcan Island.

4582

Voluta episcopalis, rejected sp.

730

Voluta mitra L. 1758, added to Official List.

730

Volvox, ultrastructure with reference to inversion.

1060

Volvox aureus, 7528

- parthenospore induction. 1059
- toxicity of rubratoxin B. 7649

Volvox carteri, anatomy, reproduction, differentiation.

6779

Volvox globator.

7528

Volvox roussetii, induction and development of

reproductive cells. 6780

Volvox tertius.

7528

W

Wadden Sea, growth and mortality of culture mussels.

2009

Wak goldmanni, distribution, Indian Ocean.

6534

Wall formation, related to Golgi apparatus in

Pleurochrysis scherffellii. 1039

Wallago attu,

- development of skull dermal bones. 7407
- seasonal changes in biochemical composition. 882

Walrus, pacific, age-sex structure and reproductive

capacity. 7226

Wardium amphitricha, strobilization, Baltic and

Okhotsk Seas. 8514

Wastewater,

- biological purification. 1704
- disinfection, chlorine. 1706
- treatment plant, *Nematoda*. 3148

Wataseia scintillans.

7897

Water, (see also Chemical analyses)

- aeration influence on *Enterobacteriaceae*. 3297
- analysis, biochemical demand, mineral source. 3781
- analysis, PCP. 6658
- balance, *Aphanius dispar*. 5436
- balance, eggs of *Salmo salar*. 5301
- balance, *Sudanonautes africanus africanus*. 1938

chemical analysis. 6651

chemistry, sandy zones between sea and littoral lakes. 2396

circulation, isotopes, Atlantic Ocean. 6629

circulation, nitrate circulation, Pacific. 5554

colour and transparency, clarification using sodium alginate. 8275

colour and transparency, Indian Ocean. 5563

expulsion vesicle, contractile vacuole. 1837

filtration, algal suspensions, electrokinetic

phenomena. 2508

flow, hydrodynamics, baffled inclined surface. 4591

level effect on ecology, Lake Victoria. 5532

level fluctuation effect on chironomid larvae. 4100

mixing, African Lakes. 3730

mixing, northeast Atlantic. 3745

movement, marine biological aspects. 1690

outlay by *Eichhornia crassipes*. 1137

purification and sterilization. 1714

purification, biological processing. 1718

purification, electrolytic process. 4762

purification, macrophytes. 4779

purification, oil pollutants. 1719

purification, patented method. 1001

purification, patented method by flocculation. 997

purification, patented method for aerobically

purifying waste. 999

purification, patented method using coal adsorbents. 1000

purification, removal of algae in unit processes. 7

quality effect on survival of *Oncorhynchus*. 845

quality, pollution, Danube. 3755

resources, Great Lakes. 3134

resources, pollution. 3775

sampler. 2457

sampling by winch. 3780

sampling of radioactivity. 2460

stratification, pollution, Lake Pfaffikon. 3750

supplies of drinking water, diatoms as indicators.

4545

supplies, pollution. 3777

supplies, Porifera in raw-water transmission pipes. 2578

supplies, potability. 3139

supplies, quality control. 6802

temperature, Glenan Archipelago. 4523

transparency measurement. 6701

transparency, plankton. 4480

treatment, aerobic thermophilic process. 3155

treatment, anaerobic filter. 3156

treatment, filamentous, low pH. 3153

treatment, methane fermentation. 3151

treatment, N₂ sources. 3154

velocity, related to aquatic vegetations. 1138

Water moulds, Chichijima, Bonin Islands.

1819

Watercress, minerals.

4796

Watersipora, frontal wall anatomy.

7934

Watersipora arcuata, fouling organisms, South

California. 4198

Waves,

- barrier structure. 6710
- simulation, for cultivation of shallow water sedimentary organisms. 5860

Waxes, esters, sperm whale head oil.

6315

Weberian apparatus, Siluriformes.

2999

Weeds,

- bioassays for nitrogen and phosphate. 1033
- biological control by *Ctenopharyngodon idella*. 8137
- biological control by *Ctenopharyngodon idella*, India.

Weeds, contd.,

- 8233
- biological control by fish. 3564
- control by compositions containing indanyl ketones. 611
- control, carbamates Algae, carbamates for control. 2482
- control, fish ponds. 3563
- control, fish ponds, Asia and Far East. 3560
- control, fish ponds, Europe. 3562
- control, fish ponds, Near East. 3559
- control, fish ponds, United States. 3558
- control, patented composition. 1825
- control, pond weed. 3561
- control, *Pseudomonas aureofaciens*. 4600
- control, review. 1824
- control using compositions containing nitro- and amino-indan compounds. 9
- control using water-soluble azides. 1136
- control with substituted phenylureas. 2481
- harvester. 7592
- nutritive value. 7314
- review. 1824
- Volta Basin. 7437
- Weight**, and food conversion factors in young flatfish. 941
- Weight loss**, starvation, *Salmo gairdneri*. 5283
- Well water**, amphipod crustaceans. 675
- West Indies**, unrecorded nesting sites for *Dermochelys* and *Eretmochelys*. 779
- Western Caroline Islands**, Palau, ecology of *Tridacna*. 3481
- Wet weight**, of micronekton, after centrifugation. 1725
- Whale**,
 - gas chromatography, fatty acids, visceral lipid, fin whale. 6316
 - grey, artificial radioactivity. 2897
 - spp caught off the Mediterranean coasts. 330
- White Sea**, breeding of *Asterias rubens*. 2037
- Wilsonidius alaskaensis** gen. et sp. n., (Copepoda) Pacific. 4888
- Winches**, improved power block. 6352
- Wintering**,
 - Tilapia. 2300
 - white whales in James Bay, Canada. 790
- Wolffia arrhiza**. 3868
- Wood**, destruction by Bryozoa, brackish water. 5059
- Woodruffia zionae**. 3317
- Wormaldia occipitalis**. 5524
- Wrangelia argus**. 8278
- Wyeomia**. 3310

X

X-irradiation,

- effect on cell proliferation in intestine, *Carassius auratus*. 5320
- growth stimulation and inhibition, *Hydra*. 6893
- XY females; *Platypocilus maculatus*. 1633
- X-radiation**, *Ankistrodesmus braunii*. 5692
- X-ray**,
 - diffraction patterns of shells, Indian molluscs. 6098

diffraction, taxonomy, *Saprochaete saccharophila*. 3307

Xanthias punctatus, new host for *Gigantione moebi*. 4090

Xanthidae,

bibliography, larvae. 3408
distribution, Ryukyu and Amami Islands. 6056
southern Japan. 8594
west Pacific. 8562

Xanthidium regulare, polymorphism and taxonomy. 4631

Xanthine oxidase, estimation, *Trachurus*. 3576

Xanthocalanus alvinae. 6940

Xanthocalanus distinctus. 6940

Xanthocalanus elongatus. 6940

Xanthocalanus macrocephalon. 6940

Xanthophyceae, 3192, 5618, 6599, 7487

carotenoid pigment patterns. 4700

cytology and ultrastructure. 23

intracellular origin of flagellar hairs. 8284

Minnesota. 3802

S. India. 22

Xenentodon. 7422

Xenentodon cancilla, parasites. 8506

Xenocoeloma, allenii, development of gonads. 5981

Xenocoelidae, larvae, western North Atlantic. 454

Xenodermichthys copei. 5164

Xenopa carus africanus gen. et sp. n., (Ereynetidae), parasitic on *Xenopus*. 2736

Xenopus, 8732, 8737

DNA location. 2863

formation of somites. 775

gene. 2862

ion exchange investigation. 4241

RNA-DNA hybrid, in oocytes. 4249

RNA sequence, diversity. 3524

stimulation of mitosis, kidneys. 3525

synthesis, RNA. 4250

Xenopus laevis, 7198

acid phosphatase in tail. 6282

adrenergic receptors. 3513

brush border development, intestine, metamorphosis. 6281

chromatography, nucleic acids. 6278

cilia in cloaca and hind gut. 8004

conversion of hydroxyprogesterone to androstenedione. 6283

DNA synthesis. 5139

ectopic pituitary homoplasts. 6284

effect of actinomycin D on larval nucleolar formation. 6277

effect of tetrodotoxin of nodal membranes. 5138

excretion of blood ammonia. 2068

grafting. 6285

haemoglobin synthesis in erythrocytes. 3526

histogenesis of larval lymphoid organs. 776

host to *Xenopacarus africanus* gen. et sp. n. (Ereynetidae). 2736

immunoglobulins. 8788

modification of flexion to repeated stimulation. 8789

nuclear pore flow rate. 3527

origin of "germinal cytoplasm". 774

phosphorylation of thymidine by oocytes and eggs. 5135

presence of caerulein in skin extracts. 6229

ribosomes and glycogen in gastrulae. 773

RNA populations, embryo. 6289

rRNA precursors. 2069

secondary chromosomal constrictions. 6290

secretory activity in pars intermedia. 6276, 6286,

Xenopus laevis, contd.,

6287

sound spectrogram. 6291

ultrastructure of chordamesoderm-neurectoderm. 6279

vegetalizing induction factor. 6280

Xestoleberis. 7812**Xiphias gladius**,

larvae, Western Atlantic. 4437

nucleotide degradation in frozen muscle. 450

Xiphias platypterus, designated type species. 5395**Xiphopenaeus**. 5171**Xiphopenaeus kroyeri**. 7798**Xiphophorus**,

development and heredity of caudal process. 949

interspecific behavioural differences. 6591

x *Platyopocilus*, growth and amino acids. 3051**Xiphophorus helleri**, 4380, 4798

localization of lactate dehydrogenase, eye cells. 8217

Y**Yeasts**,interrelations with *Chlorella* under joint cultivation. 1047

marine. 1818

taxonomic study. 3860

Yoldia. 7440, 7874**Yttrium**,effect of chelation on uptake and loss, *Porphyra*. 5750

extraction from seawater. 6643

Yugoslavia,*Chironomidae*, ecology. 3422

new triclads from Lake Ohrid. 646

Z**Zacco platypus**. 7451**Zalophus californianus**, 7223

mortality, San Miguel Island. 8834

skeleton deformity, San Francisco. 3552

skull growth and comparison of populations. 8033

sonar discrimination. 5160

Zambia, Lake Kariba, schistosomiasis transmission. 721**Zanclus cornutus**. 4524**Zannichellia**. 8137**Zanzibar**, Tilapia. 3678**Zebrias zebra**. 5453**Zelandobius** spp., taxonomy. 4992**Zenkevichiella tridentata**. 8544**Zibethailurus serval**, parasitism by *Joyeuxiella**guilhoni* sp. n., Tchad. 7682**Zimmermanniella**. 7546**Zinc**,*Crassostrea virginica*, North Carolina. 4143levels, *Crassostrea virginica*, North Carolina. 4142radioactive, loss in *Mytilus galloprovincialis*. 2797toxicity, *Salmo gairdneri*. 7452toxicity to *Chlorophyceae*. 7501uptake, *Fontinalis antipyretica*. 1132uptake, *Mytilus galloprovincialis*. 4156**Ziphiini**, relationships. 6318**Ziphius cavirostris**. 7218**Zoarces viviparus**. 5404, 7347**Zonaria farlowii**, reproduction, cytology and ultrastructure. 1790**Zonation**, *Oligochaeta*, Isle of Sylt. 7701**Zonocypris leavigata**. 7000**Zoochlorellae**, maltose excretion in *Hydra viridis*. 637**Zoogeography**, see Distribution.**Zoogloea ramigera**, volutin granules. 6813**Zoology**, field studies, Norway. 5604**Zooplankton**, 6028, 6654

abundance, Pacific. 3719

Baltic. 3070

behaviour at total solar eclipse, Gulf of Mexico. 9053

Bermuda. 1665

biochemistry of bathypelagic spp. 5513

biomass and species diversity, Kola Peninsula. 7432

biomass, Western Mediterranean. 4496

caloric and carbon equivalents. 1668

Crustacea of L. Ontario. 959

Crustacea, population dynamics, Buchensee. 4491

Crustacea, population dynamics, Mindelsee. 4491

Crustacea, simulation of population using computer. 6603

determination of production using radiocarbons. 5517

ecology, Lake George. 3067

ecology, Madagascar. 5510

effect of oil pollution, Black Sea. 7473

effect of sewage, Florida. 6674

feeding. 3071

food utilization. 4492

Foraminifera at harbour exit, Villefranche. 620

grazing by *Dorosoma cepedianum*. 6388

grazing rates. 4482

Infusoria, Sevastopol Bay. 4494

Lake Erie. 1669

Lake Langelmavesi, Finland. 2359

Lake Van. 5531

micronekton of the eastern tropical Pacific and relations to tuna. 452

model of Crustacea. 7433

new neuston net. 1012

northeast Atlantic. 9043

northwest Atlantic. 1661, 1662

nutrition and metabolism. 960

organic production, Atlantic Ocean. 1678

Oslo fjord. 9050

population and production ecology, Baffin Island. 480

population dynamics, Caspian Sea. 7431

population estimate, Baltic and Gulf of Riga. 5507

population estimate, Iowa. 6606

preyed on by *Cyclops bicuspidatus thomasi*, Marion Lake, BC. 481

Protozoa, Krasnodar. 4493

respiration. 3066

Romanian coast. 2356

river Weser, Germany. 1666

seasonal variation, Caribbean Sea. 6605

sinking rate, faecal pellets. 1673

Zooplankton, contd.,

- standing crop, North Sea. 5483
- structural features, jellyfish. 4847
- temperature tolerance, Chesapeake Bay. 5505
- toxicity of marine pollutants. 7464
- variations, Hawaii. 9052
- vertical distribution. 3065
- vertical distribution, Baltic Sea. 1671
- vertical distribution, Lake Maggiore. 3068
- Woolf lakes, New South Wales. 4507

Zoospores,

- adhesion, Enteromorpha. 4671
- comparative morphology in Bumilleria sicula and Tribonema vulgare. 23
- Enteromorpha, ultrastructure and biochemistry. 4670
- germination in Blastocladia, 1127, 1128
- physiology of production in Aphanomyces. 1126
- vesicle development, Bulbochaete hiloensis. 6753

Zooxanthellae,

- in Cassiopea andromeda, importance in strobilation. 3918
- in Heteroxenia elisabethae. 3924
- regulation of numbers in coelenterate symbiosis. 631
- symbionts of Tridacnidae, Pacific. 4730

Zosimus aeneus, 6056

- distribution, Pacific. 6056
- toxins. 8605

Zostera, 4585, 6728

- endofauna of grass beds, Algeria. 4540

Zostera marina, 4533

- phosphate absorption. 5820
- under arctic winter ice. 1135

Zostera nana, 4540

Zosterinase, activity, Invertebrata. 8431

Zygnema, quasi-crystalline lamellar lattice in chloroplasts. 5732

Zygnemaceae,

- Africa. 53
- Panjab, India. 577

Zygogonium, Yellowstone Park, ecology. 3249

Zygoptera, neural patterns, ventilatory movements. 3420

Zygospira. 7130

Zygotes, stabilization of polarity axis in Fucaceae. 1071

Zymogen cells, ultrastructure, Hydra viridis. 122

Abbreviations

adenine	GABA
angstrom	gall
acetylcholine	GDP
adrenocorticotrophic hormone	gen
adenosine diphosphate	gen.n.
adenosine monophosphate	GLC
Anoplura	GMP
arginine phosphate	G6PD
approximately	GTP
Arachnida	HA
Aranee	Hb
atomic weight	Hem.
adenosine triphosphate	Het.
adenosine triphosphatase	HI
August	Hom.
biochemical oxygen demand	hr
bis in die (twice daily)	HS
benzene hexachloride	HT
curie	Hym.
cytosine	Hz
circa	i.a.
corpora allata, corpus allatum	IAA
corpora allata hormone	i.c.
corpora cardiaca	i.d.
median curative dose	ID ₅₀
cytidine diphosphate	IDP
complement fixation	IgG, M, etc
colony forming unit	i.m.
Chilopoda	IMP
M-cellulose	in
carboxymethyl cellulose	i.n.
cytidine monophosphate	INH
central nervous system	i.p.
co-enzyme A	IR
reduced co-enzyme A	Isop.
chemical oxygen demand	ITP
coefficient	i.v.
Coleoptera	Jan
Collembola	JH
new combination	k
compound	kc/s
concentration	kHz
co-enzyme Q (ubiquinone)	Km
cytopathic effect	lb
cycles per second	L/D
cerebrospinal fluid	L/D ₅₀
calcitonin	LDH
cytidine triphosphate	Lep.
cultivar	log
cytochrome	LS
decimal reduction time	LS
dichloro-diphenyl-acetic acid	m
dichloro-diphenyl-dichloroethylene	M
dichloro-diphenyl-trichloroethane	μ
cellulose	Mall.
diethylaminoethyl cellulose	MBC
December	Mec.
Dermaptera	Megal.
diameter	mg
Dictyoptera	MIC
Diplura	min
Diplopoda	mol wt
Diptera	mp
deoxyribonucleic acid	MPN
deoxyribonuclease	mRNA
deoxyribonucleoprotein	Myriap.
dihydroxyphenylalanine	n
cellulose	NAD(H ₂)
epichlorohydrin-triethanolamine	NADP(H ₂)
and cellulose	Neur.
median effective dose	NMR
ethylenediamine-tetraacetic acid	Nov
Embrioptera	NTP
Embsen-Meyerhof-Parnas	Oct
ethyl niethane sulphinate	OD
ear, nose and throat	Odon.
Ephemeroptera	Onych.
endoplasmic reticulum	OP
electron spin resonance	Orth.
forma	oz
fatty acid(s)	PAS
flavine adenine dinucleotide	PBS
new family	PDA
February	PFU
(reduced) flavoprotein	PGPD
forma specialis	PGM
foot, feet	Phasm.
foot-candle(s)	PKFU
fathom(s)	Plec.
gram(s)	
guanine	

gamma-aminobutyric acid	PMR
gallon(s)	p.o.
guanosine diphosphate	PP
genus	PPLD
new genus	ppm
gas layer chromatography	Prot.
guanosine monophosphate	Pseudosc
glucose-6-phosphate	Pseudoscorpiones
dehydrogenase	p.s.i.
guanosine triphosphate	Psoc.
haemagglutination	PTC
haemoglobin	PTH
Hemiptera	q.i.d.
Heteroptera	quat
haemagglutination inhibition	rad
Homoptera	RBC
hour(s)	RI
horizontal section	RH
hydroxytryptamine	RNA
Hymenoptera	RNase
herz	RNP
intraarterial, -ly	rpm
indole acetic acid	RO
intracerebral, -ly	rRNA
intradermal, -ly	RV
median infective dose	S
inosine diphosphate	s.c.
immunoglobulin G, M, etc	Scorp.
intramuscular, -ly	sec
inosine monophosphate	Sapt
inch, inches	SG
intranasal, -ly	Siphon.
isoniazid	sp(p)
intraperitoneal, -ly	sp.n.
infrared	sRNA
Isoptera	s.str.
inosine triphosphate	str
intravenous, -ly	Streps
January	subfam.n.
juvenile hormone	subgen
kilo	subgen.n.
kilocycles per second	subsp(p)
kilohertz	subsp.n.
Michaelis constant	SV40
pound(s)	syn.n.
light/dark regime	T
median lethal dose	TCA
lactate dehydrogenase	TCD ₅₀
Lepidoptera	TCT
logarithm	TEM
longitudinal section	temp
milli or meter(s)	tert
molar	t.i.d.
micro, micron(s)	TLC
Mallophaga	TMV
minimum bactericidal concentration	tr
Mecoptera	tr.n.
Megaloptera	Trich.
milligram(s)	Tris
minimum inhibitory concentration	2-amino-2-hydroxymethylpropane-1,3-diol
minute(s)	tRNA
molecular weight	T.S.
melting point	U
most probable number	UDP
messenger RNA	UDPG
Myriapoda	UDPNAG
nano	UMP
(reduced) nicotinamide adenine dinucleotide	UTP
(reduced) nicotinamide adenine dinucleotide phosphate	UV
Neuroptera	var
nuclear magnetic resonance	var.n.
November	vol
normal temperature & pressure	VS
October	v/v
optical density	WBC
Onychophora	wk
osmotic pressure	w/v
Orthoptera	w/w
ounce(s)	Xiph.
para-aminosalicylic acid	yd
phosphate buffered saline	yr
potato dextrose agar	Zor.
plaque forming unit	%
6-phosphogluconate dehydrogenase	%o
phosphoglucomutase	Amino acids are only abbreviated in the description of their sequence in a peptide or protein: the I.U.P.A.C. abbreviations are used. Positive inorganic ions are written as Mn ²⁺ , N ³⁺ , negative ions as Cl ⁻ , SO ₄ ²⁻ . Elements are denoted by symbols.
Phasmida	
puck forming unit	
Plecoptera	

proton magnetic resonance	In abstracts of patents the following occur:
per os	A application date
pyrophosphate	Acc. accepted
pleuropneumonia-like organism	Appn. application
parts per million	Contn. Continuation
Protura	P publication date
Pseudosc	PR priority date
Pseudoscorpiones	Ser. No. serial number
pounds per square inch	The ICIREPAT country code is used, including the following:
Psocoptera	AU Australia
phenylthiocarbamide	BE Belgium
parathyroid hormone	BG Bulgaria
quarter in die (4 times a day)	BR Brazil
quaternary	CA Canada
radiation unit (100 ergs/g)	CH Switzerland
red blood cell	CS Czechoslovakia
relative flow rate	DK Denmark
relative humidity	DL Germany, East
ribonucleic acid	DT Germany, West
ribonuclease	EI Ireland
ribonucleoprotein	ES Spain
revolutions per minute	FR France
respiratory quotient	GB United Kingdom
ribosomal RNA	HU Hungary
review	IL Israel
Svedberg unit	IN India
subcutaneous, -ly	IT Italy
Scorpiones	JA Japan
second(s)	LU Luxembourg
September	MX Mexico
Specific gravity	NL Netherlands
Siphonaptera	NZ Norway
species	NZ New Zealand
new species	OE Austria
soluble RNA	PK Pakistan
sensu stricto	PO Poland
strain	PT Portugal
Strepsiptera	RU Romania
new subfamily	SF Finland
subgenus	SU USSR
new subgenus	SW Sweden
subspecies	US USA
new subspecies	YU Yugoslavia
simian virus 40	ZA South Africa
new synonym	
thymine	
trichloroacetic acid	
median tissue culture infective dose	
thyrocalcitonin	
triethylene melamine	
temperature	
tertiary	
ter in die (three times a day)	
thin-layer chromatography	
tobacco mosaic virus	
tribe	
new tribe	
Trichoptera	
2-amino-2-hydroxymethylpropane-1,3-diol	
transfer RNA	
transverse section	
uracil	
uridine diphosphate	
uridine diphosphate glucose	
uridine diphosphate	
N-acetylglucosamine	
uridine monophosphate	
uridine triphosphate	
ultraviolet	
variety	
new variety	
volume	
vertical section	
volume per volume	
white blood cell	
week, weeks	
weight per volume	
weight per weight	
Xiphosura	
yard(s)	
year(s)	
Zoraptera	
per cent	
per thousand	

application date	
accepted	
application	
Continuation	
publication date	
priority date	
serial number	
The ICIREPAT country code is used, including the following:	
AU Australia	
BE Belgium	
BG Bulgaria	
BR Brazil	
CA Canada	
CH Switzerland	
CS Czechoslovakia	
DK Denmark	
DL Germany, East	
DT Germany, West	
EI Ireland	
ES Spain	
FR France	
GB United Kingdom	
HU Hungary	
IL Israel	
IN India	
IT Italy	
JA Japan	
LU Luxembourg	
MX Mexico	
NL Netherlands	
NZ Norway	
NZ New Zealand	
OE Austria	
PK Pakistan	
PO Poland	
PT Portugal	
RU Romania	
SF Finland	
SU USSR	
SW Sweden	
US USA	
YU Yugoslavia	
ZA South Africa	



